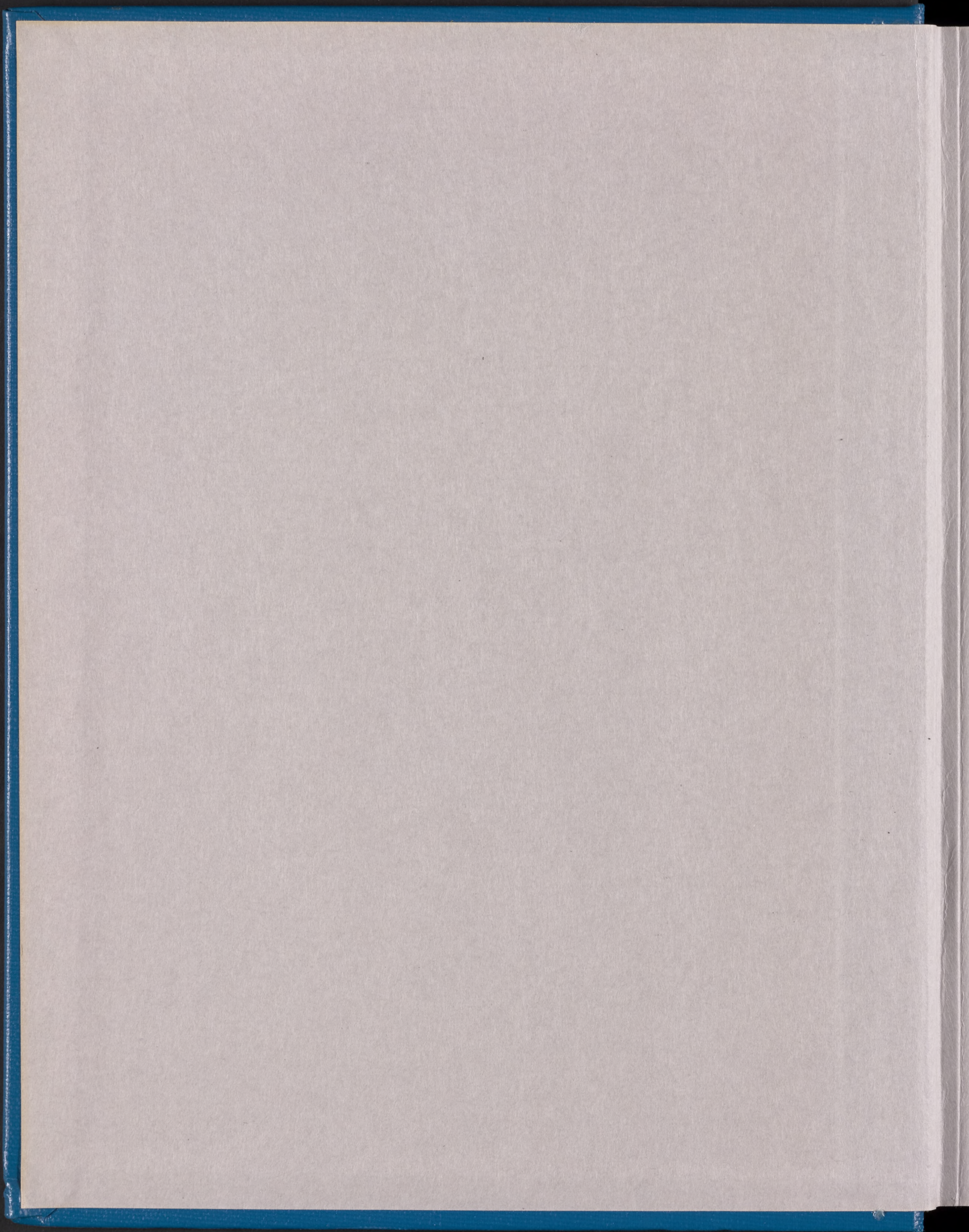
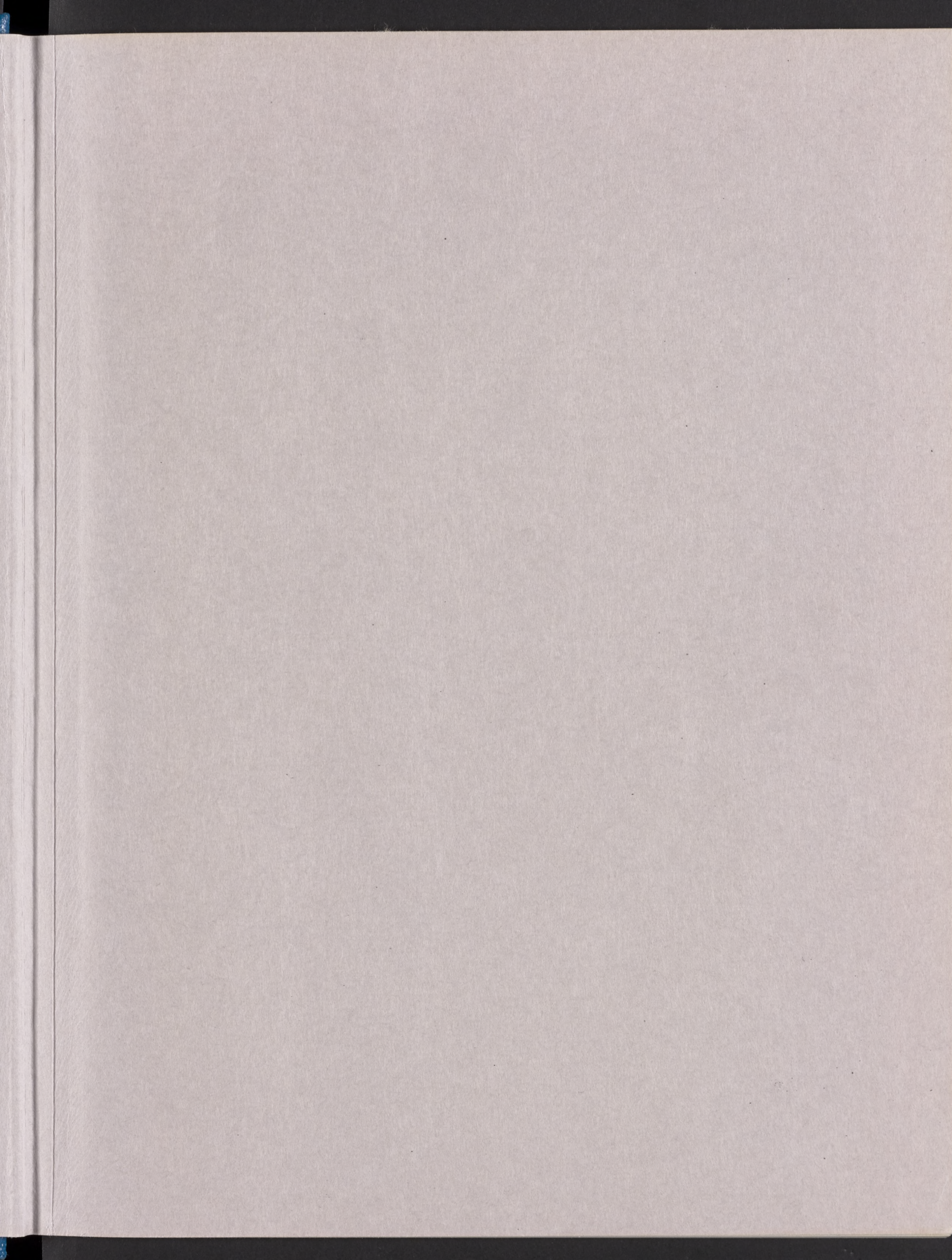


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FARM BOY TO EVOLUTIONIST  
THE MEMOIR OF  
HERMAN T. SPIETH

Introduction by Robert P. Wagner

Interviews Conducted by  
Marvin Brienens



Herman T. Spieth at University of California, Riverside 1964

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This memoir, covering the past several decades, is dedicated to my beloved granddaughters Kimberly Anne, Kelley Renée, Kristina Elizabeth, and Kara Mia Spieth, who will witness the future.

--Herman T. Spieth

April 8, 1979

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*the project's own style sheet to maintain an optimal printed version of the spoken word.*

## Statement of Editorial Purpose

The procedures of our oral history projects include not only the tape recording of memoirs but also their transcription, editing, and eventual production in book form. What is presented to the reader is a version of the spoken word, and any attempts to mask this fact rob the presentation of the intimacy, candor, and spontaneity which give each memoir freshness and charm. However, standard and recognized editorial techniques are used to maintain a consistency of style throughout all oral history project publications. Since basically each title is for University archival deposit, such matters as dates, names, places, and scientific terminology must be presented with accuracy. Editors will rely on the Chicago Manual of Style (1969) and the project's own style sheet to maintain an optimal printed version of the spoken word.

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HERMAN T. SPIETH

FARM BOY TO EVOLUTIONIST

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Like many of the outstanding biologists I am acquainted with, Herman was a so-so student through primary and secondary schools. He did develop a passion for history which lasts to the present day, and on entering college he was pointing in the direction of making history his major. But the history teacher at Indiana Central was sufficiently dull to discourage Herman from pursuing history in formal courses. He turned instead to zoology, because the teacher of that subject was a live wire who recognized a spark in Herman he thought he could use to ignite a fire. He was right, and Herman went on immediately into graduate school after obtaining his B.A. As a graduate student at Indiana University he was able to return to an early interest, the study of evolution. This and systematics has absorbed most of his research energy ever since. After completing

## INTRODUCTION

Herman Theodore Spieth had at least five possible paths to follow as an academic man serving at major institutions: teaching, research, administration, public service to the institution (committee work and the like). Most of us academics try hard in one or two of these categories and give short shrift to the rest. Herman has participated in all five and has as a result made significant contributions to American higher education and the teaching and research of biology. From the time he began his professional career at the City College of New York in 1931 after receiving his Ph.D. at Indiana University until now he has been following one or more of these academic paths and shows no sign of slowing down.

One would expect that Herman, because he has accomplished so much, to act like a typical workaholic who has few close friends and is a dull companion. The opposite is true. He is never dull company, and I know of no one who has more close friends. Despite the fact that he served a considerable number of years as an administrator building new or reviving old departments, transforming an undergraduate college into a university, and seeing to the planning and construction of many new buildings, he seems to have no enemies I am aware of. There must be some, but they seem to manage a low profile. He himself has never in my presence made a harsh remark about any of his colleagues. He goes no further than to express disappointment in some of them because they have not measured up to his expectations.

Herman came off a farm in southern Indiana--an offspring of a family of Germanic origin. His father, mother and bachelor uncle managed a meager material existence on that farm, but provided, despite what we would consider today a substandard income, a home environment that inculcated in Herman a deep concern for other people whatever their color or creed, and a probity of mind that is unfortunately not common in the human population at large. A capacity for sustained hard work, a charitable interest in his fellow man and an honest, probing intellect characterize Herman Spieth.

Like many of the outstanding biologists I am acquainted with, Herman was a so-so student through primary and secondary schools. He did develop a passion for history which lasts to the present day, and on entering college he was pointing in the direction of making history his major. But the history teacher at Indiana Central was sufficiently dull to discourage Herman from pursuing history in formal courses. He turned instead to zoology, because the teacher of that subject was a live wire who recognized a spark in Herman he thought he could use to ignite a fire. He was right, and Herman went on immediately into graduate school after obtaining his B.A. As a graduate student at Indiana University he was able to return to an early interest, the study of evolution. This and systematics has absorbed most of his research energy ever since. After completing

his Ph.D. with a dissertation on the systematics of Mayflies, he obtained a position as instructor in Biology at the City College of New York. At about this time he was lucky enough to marry Evelyn, née Wilkerson, who has abided with him and sustained him ever since. So the farm boy from Indiana went off to the Big Apple with wife, a good set of genes from his parents and a set of imprinted values from them to complete his phenotype. All three of these were in a large measure to guide his future career.

Herman's professional career after graduate school divides naturally into four periods. In the first of these periods-1931 to 1953-he was primarily a teacher at the City College. He spent most of his teaching time in the undergraduate laboratories. At this time City College was an undergraduate school only and there were no graduate students to relieve the professors of part of the laboratory teaching load. He had one course he could call his own, Field Zoology. It had a degree of fame among the biology students because if one took it, one had to work like the devil to keep up with a fast pace of field trips, and laboratory periods in which specimens were identified, and the teacher gave informal lectures. It covered the animal kingdom from Cnidaria to Vertebrata, and as a former participant (1939) I can honestly say that I learned more about animals in one semester than I have learned before or since. Herman worked best with small groups of students, and this class was ideal for him for it was limited to 16 students. Over these 16 he cast a spell, and everyone worked hard. He was elevated to a rank somewhat above most other professors because he treated each member of the class as a special individual. This is a kind of treatment few students received at City College.

It was natural for Herman, with Evelyn's help, to have students he thought ought to continue the study of biology beyond the undergraduate level to his home. These visits evolved finally into a regular seminar which sustained a degree of fame not only at the College, but beyond, because it produced graduate students of high calibre many of whom were to become outstanding biologists. This seminar was after my time as a student, but the following story will illustrate what I mean when I say that Herman had a powerful influence on his students.

One Saturday afternoon our class was collecting insects somewhere in Westchester County. I remember that I was trying to transfer a bug from my net into a cyanide jar when Herman came up to me and asked, "What are you going to do when you graduate?". I really had no idea, but thought saying so would sound silly particularly since I was a senior, so I answered by saying I guessed I'd go to medical school. "No you're not," replied Herman, "you are going to graduate school and take a Ph.D. in biology." I followed his instructions (notice I

did not say advice) and have never regretted it. This anecdote illustrates not only Herman's influence as a teacher, but his forthrightness which has endeared him to many like me, but also irritated others when they did not agree with him. Herman always speaks his mind and the chips fall where they may.

The City College episode constituted Herman's major effort in undergraduate teaching, but despite the great demands on his time (the minimum teaching load at City College was 16 hours per week!) he did other things like continuing his mayfly research after school hours at the American Museum of Natural History, teaching a graduate course at Columbia University, carrying on a family life in Tenafly New Jersey, and teaching a summer course at Cold Spring Harbor Laboratory. He took time out from this incredibly busy schedule during World War II to serve in the Army Air Force. This was at considerable sacrifice financially and to his professional career.

In 1953 he and Evelyn, and then small son, Philip, made a break from Gotham and ventured westward. This began the second episode. It was a major transition for Herman from being primarily a teacher in a mature institution where he had no administrative duties to being a Chairman of a Division in a fledgling institution where his duties were to be primarily administrative. The Riverside branch of the University of California was just starting to be organized and it was Herman's job to organize the Division of Life Sciences. This meant he had to recruit a faculty from scratch, buy supplies, and get the facilities necessary to conduct classes in order. Despite a previous lack of administrative experience, he got the division rolling in about a year. He got to be such a good administrator that he was appointed Provost of the campus in 1956 and metamorphosed into a Chancellor in 1959, a position he held until 1964.

The period of time Herman served as the chief administrator at Riverside was a difficult and busy one for him. Not only did the faculty and student body grow greatly in size, but buildings had to be planned and built, and the peace maintained between town and gown in a community not experienced with gown. Riversiders were quite conservative in their outlook, and as might be expected some of the more influential ones had their fur rubbed the wrong way by the activities of some faculty, and the opinions of some of the speakers that were brought in. The country was still getting over the effects of Joe McCarthy, and the period of unrest which overcame all of the big campuses in the country was starting. Herman is in many respects a conservative himself, but he knows what academic freedom is and the necessity of preserving it. He did preserve it at Riverside and

to gain the respect of most of the town, the Regents, and the faculty. Parenthetically, no academic administrator can gain the complete respect of his faculty. If he does, it's probably not a good faculty. Added to these difficulties was the fact that the Regents decreed that Riverside, which started out originally to be a small liberal arts college, was to become a university with a graduate program. This transition caused no end of difficulties with some of the faculty.

About ten years after arriving at Riverside Herman grew weary of administration. As he puts it the law of accumulating grievances was beginning to work, and the possibility of returning to research was growing more and more attractive. So when the opportunity presented itself to join the group investigating the evolution of the genus *Drosophila* of the Hawaiian Islands he grabbed it, and resigned his administrative position. In order not to be obtrusive as a former Chancellor on the Riverside campus he also accepted the invitation of Emil Mrak, then Chancellor of UC Davis to transfer there and become Chairman of the Department of Zoology.

Here at Davis began episode three. Since Davis was an old, established branch of UC, and the Department an original unit, the new job was a relatively low key one for a person with Herman's administrative experience. He was able to help the Department grow in size and stature and at the same time carry out a research program. It should be emphasized that he rarely had time to think about biology let alone read the literature while at Riverside. So when he arrived at Davis he was far behind the moving front of biological thought. Most individuals when faced with this kind of transition near the beginning of their 6th decade would administer, teach and otherwise vegetate. Retooling for active research after a ten year absence from it requires great effort and discipline. Herman characteristically for him started a new research career with the enthusiasm of a young assistant professor fresh out of graduate school. His participation in the Hawaiian *Drosophila* program has continued unabated since 1964. In 1973 he retired from active teaching and participation in departmental affairs and started episode four--a blissful period of uninterrupted research--a period well earned after 50 years of teaching and administration.

Herman's direct approach to things, in action and speech, has resulted in rather disparate opinions of his views on the body politic among his academic peers. Those who call themselves liberal classify him as conservative, a few call him reactionary and I have heard one call him a fascist. On the other hand, some who call themselves conservative consider him a liberal. These rather confusing views of him have both amused and puzzled me. But I have finally arrived at an explanation which makes sense at least to me.

Herman is a strict Darwinian constructionist. To him natural selection and the survival of the fittest in the Darwinian sense is the overriding rule of nature. Furthermore like Darwin he considers man is in nature not outside it. As part of this Weltanschauung he views the good society as coming from the good man. This outlook on the human condition I would not only call Platonic but also Judeo-Christian. It conflicts with those who hold with Jean Jacques Rousseau and Karl Marx that the good man comes from the good society. This view has definite overtones of neolamarckianism, and the Marxists at least in Russia, have been very sympathetic toward it. This is why Michurin and Lysenko still enjoy a good following there, even among the biologists.

These two theses are not necessarily antithetical, but those who lean to opposite sides are bound to disagree with each other's outlook on man and society. That's why lots of people disagree with Herman. In another sense it's not a question of conservative versus liberal but how one looks at the nature-nurture dichotomy. Herman seems to take a stand more on the nature side than the nurture. If this makes him a reactionary then so are the Marxists reactionary, but at the other extreme. Actually from my conversations with him over many years I would say he stands reasonably close to the center with respect to this question. However, he never forgets the genotype and how it has been molded by the forces of selection. Unfortunately many who call themselves liberals do forget this, even though they should know better.

Robert P. Wagner  
 Professor Emeritus  
 Department of Zoology  
 University of Texas, Austin  
 and  
 Research Consultant  
 Health Division  
 Los Alamos Scientific  
 Laboratory  
 Los Alamos, New Mexico

## HISTORY OF THE INTERVIEW WITH COMMENTS BY THE INTERVIEWER

The Oral History Office of the University of California, Davis was originated by the University Library in order to produce and preserve the biographical memoirs of persons of major importance to the history of California agriculture, livestock and to the Davis campus.

Funding for this work was provided through the office of the Vice-President of the University, C. O. McCorkle, Jr. in order to encourage the preservation of such memoirs. The Faculty Advisory Committee of the Oral History Office selected Earl Coke, Henry Schacht and Herman Spieth as three outstanding figures in California agriculture and campus history to be interviewed in this specially funded series.

The Herman Spieth oral history consists of twelve interviews taped between September 1976 and August 1977. The dates are September 20, September 24, September 28, 1976; January 27, February 1, June 28, July 5, July 19, July 21, July 26, July 28 and August 4, 1977. Interview sessions varied in length but averaged one hour each.

Professor Spieth's memoir was not edited by the interviewer but by the memoirist's wife, Evelyn Spieth. Her collaboration in editing her husband's scientific writings over the years assured that no one could edit this work as she has done. In reading the memoir, I note that her editing was directed primarily at the introduction of additional material in those places where the initial interviewing failed to develop the entire story. But so little is altered that this final manuscript is a faithful translation of the recorded interviews.

The interview sessions took place in the study of the Spieth home located at 1031 Miller Drive in Davis; the study is actually a small guest house on the property where Mrs. Spieth who usually greeted me at the door sent me on through the well landscaped yard to the guest house. There, Professor Spieth was usually waiting behind the sliding glass door of the study, a room rich in books and the memorabilia of an extraordinary lifetime. Customarily Mrs. Spieth would appear with hot drinks and cookies.

Professor Spieth impressed me as a man afire with both ideas and ideals and was intent on pursuing them every day of his life. He is in good health at the time of this writing, (June, 1978) but during a portion of our taped interviews he was still weak from a

serious illness. Yet his earnestness, his passion for work and his ideals were apparent even then. Above all, I came to respect his remarkably analytic mind, the logic he used in constructing his world view, his ability to observe with great perception and then to think wisely about humans and mayflies in this helter-skelter universe. I am enriched by the experience of interviewing him.

The index was prepared by A. I. Dickman, the typing was done by Lois Smith, Kathy Butz, Dorothy Petrie and Rose Charlton, proof reading by Muriel Spaulding whose volunteer efforts are invaluable.

Marvin Brienens, Interviewer

#### Family Origins and Home

Brienens: Let's begin with your family background. Spieth is a German name and I know your grandparents came from Germany. Could you tell me where they lived in Germany and what their life was like there -- and why they came to America?

Spieth: All of my grandparents came from Germany. The Spieths came from Oberesslingen which is in the so-called Swabian Alps near Stuttgart and above the Neckar River. Four brothers and one sister came to the United States. Although I have no official documentation as to why they came, it is my understanding from family tradition that they wished to escape the turmoil that followed the revolution of 1848 and especially to escape military service.

Brienens: Had there been an independent state before?

Spieth: Yes. Württemberg was an independent state.

Brienens: Was the Spieth family interested in politics in Germany at that time?

Spieth: No, but they were interested in avoiding military service [laughter].

Brienens: You think that's why they came here?

Spieth: So far as I know. All of the family came except the youngest son, whose name was David. David remained in Germany. During the years when I was a boy, my family received periodic letters from him. All five of those who came to America landed in New Orleans and went up the Mississippi River to St. Louis.

Brienens: Do you know what year that was?

## I FARM BOY'S CHILDHOOD

### Family Origins and Home

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Brienes: Do you know what year that was?

Spieth: I am not certain, but I think it was 1855.

Brienes: Why did they go to New Orleans?

Spieth: I have no notion. Apparently many of the immigrants from Germany landed at New Orleans but some, perhaps most of them, came to the East coast. St. Louis was a favorite place for many Germans who migrated to the United States at that time. If their objective was St. Louis, they could make the trip entirely by water. In those days that was unquestionably simpler than trying to traverse the area from New York City to St. Louis over land.

Brienes: What did the Spieths do for their living in Germany?

Spieth: As far as I know, they were wine growers and wine makers -- vintners. I have no information other than that. Again, this is primarily information gained from casual remarks made by my grandfather who lived with us until his death.

My Grandmother Spieth, whose maiden name was Helena Wanamaker, I know little about except that she was an orphan who had been reared in a Catholic orphan asylum in Germany in what was known at that time as the state of Hohenzollern, located on the southern side of Wurttemberg. She came to America by herself at the age of sixteen and was indentured to do so. Upon arrival in New Orleans, the indenture was revoked by the captain so that she again became a free person. She somehow made her way to St. Louis. Parenthetically, my guess is that many of the Germans who came during that period to St. Louis were from South Germany.

My Grandfather Spieth met my grandmother in St. Louis, where they were married, and then later they went to Louisville, Kentucky. All four of the Spieth brothers went to Louisville. Their sister, however, married a man by the name of Lempke and lived for the rest of her life in St. Louis. I never met her but, interestingly enough, her daughter married one of my grandfather's sons -- so there was a cousin-to-cousin marriage in my father's generation.

Brienes: What was your grandfather's name, by the way?

Spieth: Charles Frederick Spieth.

Brienes: So we have them going to Louisville.

Spieth: The brothers went there, and then they all went their own individual ways. One of the brothers ( do not remember his

Spieth: full name) became very wealthy eventually. I know very little about the fate of two of the other three brothers except that there are Spieths in the area of Louisville who are their descendants. I did not during my childhood or adulthood meet any of these descendants of the other Spieth families, because my grandfather left Louisville, crossed the Ohio River and went to a place known as Blue Lick, Indiana. He did this (according to my younger brother's knowledge) either the day before or the day that Morgan's Raiders in the Civil War came through the area.

Brienes: What were your grandfather's sympathies?

Spieth: The tradition is that he was sympathetic to the South and that probably [laughter] he left the region because Morgan's Raiders raised such havoc in the area that any sympathizers to the South would be suspect, so he hid himself into a very rural area that was less, shall I say, psychologically involved at the time.

Brienes: What did he do when he got to Blue Lick?

Spieth: At Blue Lick he farmed.

Brienes: What kind of farming?

Spieth: Well, like all farms in those days, it was a general farm. He did raise grapes, and he would take the produce of the farm to Louisville to sell. Now directly across the river from Louisville on the Indiana side are two small towns. One is New Albany and the other is Jeffersonville. Actually, it is my remembrance from my father's statement that my grandfather would go first to Jeffersonville and sell produce there and then cross the river on a ferry boat to Louisville.

Brienes: Where did he get the money to buy this farm?

Spieth: I have no notion. I have no information whatsoever.

Brienes: You don't know whether the family had money in Europe?

Spieth: I am rather sure that they had essentially little money. They probably brought very little with them.

Brienes: What do you know about your Grandfather Spieth's education?

Spieth: Essentially nothing. He could read and write. Of course, in the middle or the early part of the last century, one was fairly

Spieth: well educated in Europe, I suppose, if he could read and write well.

Brienes: Had a headstart on most.

Spieth: I never saw anything he wrote, even in the form of a letter, but he did read the newspapers regularly and was always glad to get hold of a German paper if he could find it. He had a very thick brogue, as we would say, all his life.

Brienes: Was your father born on that farm?

Spieth: My father was born on that farm at Blue Lick. He was the eighth child of nine: eight boys and one girl. He was the next to the youngest in the family and was born in 1872.

Brienes: How long did he stay on the farm?

Spieth: He spent the major part of his life on a farm. I do not have all of the dates accurately. After his mother died, and I think that was in 1899, he left Blue Lick and went to a little town known as Greenwood, which was several miles outside of Jeffersonville. Here he established a small grocery store. This store catered primarily to workmen from a little town called Cementville, which was only about three-quarters of a mile away. The economy of Cementville was completely dependent upon a small cement mill. A man by the name of Speed, who had been Secretary of the Treasury during Abraham Lincoln's administration, owned a much larger mill several miles away. There were quite a few cement mills scattered throughout the area. Speed quietly bought up all of the competing mills and then closed his competitors down, thus establishing a monopoly. The workmen at Cementville were, of course, out of jobs. They had been purchasing their groceries at my father's store on credit. The mill was closed just before a payday and they all left without paying their bills. Father was bankrupt. To make matters worse, my father, who was a kind-hearted and trusting person, had co-signed a note for a man he considered a trustworthy friend. The note was for \$20.00, but the chap kited it to \$200.00 and fled the state. My father thus had to repay the larger sum.

Brienes: Was your father married at that time?

Spieth: No, he was not.

Brienes: Had he met your mother yet?

Spieth: Yes.

Brienes: Would you tell me how they met and who your mother was?

Spieth: I do not know exactly how they met, because my remembrance is different from that of my younger brother. He believes they met when Father went to a hardware store in Louisville, Kentucky, where Mother was working. I have the vague memory that they met at a church party. I do know Father was running the grocery store when he met Mother. They were married just after the cement mills closed; apparently they lived at Greenwood for a short time before returning to Blue Lick.

Brienes: Tell me more about your mother's background.

Spieth: Mother's parents were both born in a small German town known as Blenheim, near the Holland border. Her father's name was Lambert Schulte-Wieking. I know little about him except from hearsay. He died a number of years before I was born. He was the son of a fairly affluent family in the community, and for some reason he was disinherited.

Brienes: There must be a story there. [laughter].

Spieth: I am sure there is quite an interesting story. It so happens that my daughter-in-law has just returned from Holland and she visited Blenheim one afternoon. She said that the name of Schulte-Wieking is well known in the town. She and Phil hope to go back there in a year or so, and will try to discover something about my grandparents.

Brienes: That would be interesting.

Spieth: I have a little diary of my grandfather's which is written in a script no longer used in Germany. Mixed in are Latin words and no one in the German Department at Berkeley can translate them. They say we shall have to take the diary to the Classics Department.

Spieth: But I do know that Grandfather was born in 1829; my mother was born in 1873. That means he was forty-five when she was born. There were three girls in the family, so Mother had a younger sister and an older sister, apparently all of them born after my grandfather was past forty. I do not know when my Grandmother Schulte-Wieking was born. Her maiden name was Aleida Schrapp. As far as I know, both of Mother's parents came into New York and then they made their way to Cincinnati which was another focal point for German immigrants during the past century.

Now actually my father could not buy a farm because he had gone into bankruptcy over the store. So the farm was purchased

Brienes: Do you know what they did for a living?

Spieth: I know that my grandfather went from Cincinnati to Louisville where he worked as a cabinetmaker for the Pullman Company, and he was known as probably the best of the cabinetmakers. He was a very precise man and also a difficult man to live with. In fact, as I look back on it, both of my grandfathers were often difficult. Both of my grandmothers were apparently angels. My own mother never quite forgave her father for the severity with which he treated his wife. Apparently it was in the typical Germanic tradition of the male ruling the house. Mother always remembered how on weekends his shoes had to be shined and lined up perfectly at a certain spot in the house. Being a craftsman himself, he expected his shoes to be done as well as he did his own work. [laughter]. I knew none of these grandparents except my Grandfather Spieth. I did know him when I was a young boy.

As a teenager Mother attended a business school in Louisville. At sixteen she became a bookkeeper and secretary for a large hardware store in Louisville. She was thus able to support her widowed mother with whom she lived. She continued in this position until she married at the age of twenty-eight, when she went to live on a farm. Although she had rarely even visited a farm before this, she quickly grew to love the rural area. Years later when her sons eventually induced her to sell the farm, she left it reluctantly and adamantly refused to move into a city. Instead she bought a nine acre plot outside Jeffersonville which included a small four room house that she called her "shack". Here she had fruit trees, space for growing both flowers and vegetables, and a woods at the back. She was a remarkable woman.

Brienes: Now your mother and father were married at the time the store was folding because the cement plants were closing. What did they do then?

Spieth: They went back to Blue Lick to my grandfather, who was still living on the farm there. He had been unhappy with my father's getting married, because all the rest of the children had departed and he expected my father to take care of him. Father was determined to have his own farm, so in the early 1900s (I think 1902) he and Mother bought a farm at a place called Stony Point, about eight or nine miles south of Blue Lick. The nearest village was Memphis, Indiana, and was three miles away. A somewhat larger town east of the farm is known as Charlestown, Indiana.

Now actually my father could not buy a farm because he had gone into bankruptcy over the store. So the farm was purchased

Spieth: by my mother and my father's brother David, who was the only unmarried member of Dad's family. Uncle Dave, as we knew him, lived with us all through the years until his death. Grandfather went to live with his only daughter, but he did not find this to his liking and so, after a short time, he came to Stony Point to live with my parents.

Brienes: Could you describe this farm?

Spieth: It wasn't much of a farm when they started. They had seventy acres, as I remember, and although there were a house and a barn and outbuildings, the land was very poor. The house stood on the top of a knoll and had been put there because there was a spring at the foot of the hill. The spring offered a permanent water supply for the place. The site had been used by the Indians as a campground, but eventually a block house had been built there by the white settlers. Along with the block house there were a number of outbuildings, all made out of logs. The block house had then been torn down and a frame house had been built, as well as a barn. When I was a small boy, two of the old log outhouses were still there and we made use of them. So my parents had started out on these seventy acres which were very poor and essentially abandoned because of the erosion that had taken place. Then Dad and Uncle Dave began to rebuild the land. They later purchased additional adjoining land and each time they purchased land that had been abandoned by the previous owners.

Brienes: What had been grown on this land?

Spieth: I suppose the main things that had been grown on it were corn and hay, because in those days in that area there were a limited number of crops that could be grown. It was a little too far north for tobacco and cotton. Other modern presently grown crops simply were not in existence and available then. One could, at that point in time, grow corn, wheat, oats, rye, timothy hay, and clover.

Brienes: And that's what your father and uncle grew?

Spieth: Yes, that is what they grew.

Brienes: Did they have any animals?

Spieth: They had animals, of course. There was some cash sale for the corn and wheat that they grew, but primarily the hay and most of the corn, wheat, oats and rye were used to feed the animals which in turn were then sold for cash. They also sold such

Spieth: produce as chickens, turkeys, and eggs. Milk could not be sold because of the lack of refrigeration, so they separated the cream from the milk and sold the cream periodically. The spring house was of great value because it was cool and could be used for storage of the cream.

Brienes: Was this underneath the house?

Spieth: No, it was not underneath the house but at the foot of the hill where a little cement house was built over it.

Brienes: Well, wouldn't the spring house have certain amounts of water in the bottom of it?

Spieth: The bottom was covered with water in which you could set the materials you wanted to keep cool. I think the temperature of the water was rather constant the year round and was fairly cool.

Brienes: How far away were their markets?

Spieth: At least three miles -- and for stock animals twelve miles. My father knew how to go about handling stock of that sort because as a boy he had helped my grandfather take stock to the market and they did not even have wagons for this; they had driven the stock on foot and that is one of the reasons Dad knew something about Greenwood where he finally had his store. In driving stock from Blue Lick to Louisville, they would end the first day's drive at Greenwood where a farmer friend allowed them to keep the stock overnight on his land. The next morning they would continue the drive on to Louisville, Kentucky.

Brienes: How was it working out for them as a business proposition? Were they making their way?

Spieth: So far as I know, they made an adequate living. They certainly did not become wealthy.

Brienes: Were they the only Germans -- people of Germanic stock -- in that area or was there a colony there?

Spieth: No. We were the only Germanic people of my father's generation in the region. There were some other Germanic names such as Orman and Scholl but in both instances these families had been in the United States for a considerably longer period of time. Some apparently had migrated into Indiana from the east. Most of the people who lived in the area were Scotch-Irish having

Spieth: come from the migrations from Virginia into Kentucky and from Kentucky northward, just as the Lincolns had done. Their houses showed the characteristics of Virginia architecture. We were in some ways a different family from the rest of the community.

Brienes: You were born on this farm?

Spieth: Yes.

Brienes: Can you tell me about your brothers and your family?

Spieth: I have two brothers; I am the oldest. David is approximately three and one-half years younger than I. Emmett is seven years younger.

Brienes: When were you born?

Spieth: I was born on August 21, 1905.

Brienes: What is your very earliest childhood memory?

Spieth: It is difficult to sort out childhood memories because some things have been repeated to you and you think you remember them.

Brienes: That's right [laughter].

Spieth: I suppose my earliest childhood memory is of a collie dog with the name of Teddy. I can also remember being sent to another house in the neighborhood where an aunt (my mother's oldest sister) lived -- and I couldn't understand why until I returned home the next day to find a baby brother there. Teddy was my playmate until David was born, but even after David came along he wasn't much use until he grew up a bit [laughter].

Teddy, the collie, played an important role in my life. One summer Sunday afternoon when I was about three years old my mother was exhausted and asked my father to watch me while she took a nap. Dad sat down in the swing on the front porch while Teddy and I played in the yard. Soon Dad was asleep and Teddy and I took off down the road. About three-fourths of a mile away the road crossed a creek and when we reached the creek, I was determined to get into the water. Teddy, however, refused to allow me to do so. He simply got between me and the edge of the stream and pushed me away. I was furious but finally, with tears of anger running down my face, I started home. Dad had awakened, found my foot prints in the dust of the dirt road I

- Spieth: had taken, and met me about halfway home. I explained my anger about Teddy and my father suddenly looked different than I had ever seen him previously. When I was older I learned the reason: the water in the creek I tried to get into was about six feet deep and I didn't know how to swim. Lady Luck has been a frequent companion throughout my life, and Teddy was her agent that Sunday afternoon.
- Brienes: Being brought up on a farm as a young child, you probably were put to work pretty quickly doing chores around the place.
- Spieth: Any child reared on a family farm of that day had chores to do just as soon as he became capable of doing them. There was water to be carried in buckets from the spring to the house or from the well to the house. There was wood to be carried, because all of the heat for cooking as well as for warming the house was provided by burning wood, and there was always a wood pile to replenish. There were chickens to be fed and eggs to be gathered in the chicken house or wherever the chickens had laid their eggs. And later, of course, as soon as one was able to do it, there were cows to be milked, calves to be fed, lambs to be cared for. So there was a variety of chores available that were within the competence of even a small child.
- Brienes: Do you remember how you felt about doing them?
- Spieth: Well, at times I enjoyed them and at other times I disliked doing them.
- Brienes: Did you dislike or like any chores in particular?
- Spieth: No, I had no real dislike of any one of the chores; it was just that there were times when I would rather have been reading a book or out playing with the dog -- or hunting [laughter].
- Brienes: Did you give much trouble to your parents when they asked you to do a chore?
- Spieth: That is a difficult question to answer. I suspect that often if I did not overtly rebel, I would sometimes neglect [laughter] to do the chores until forcibly told to do them. Uncle Dave, who lived with us, was my real companion in many ways during my childhood because of the nature of the logistics of the kinds of things to be done on a general farm. There were always innumerable tasks to do and while my father was taking care of such things as seeing that the cream was separated from the milk and doing other duties around the barn and animal pens, my uncle would leave immediately after an early breakfast and

Spieth: go into the fields to work. I can remember milking cows at the age of about seven and then going into the corn fields to work with my uncle.

Brienes: Did So I saw much more of my uncle during my early days than I did of my father. Uncle Dave always stayed at home when Father took produce to the market or went to the local town to shop. In fact, Uncle Dave scarcely ever left the farm. So I would be with him.

Brienes: Did you feel closer to your uncle than to your father?

Spieth: I doubt that I felt any closer to him. It was just a question that by the nature of the logistics and the way the jobs were divided, it was easiest and more effective for me to be working with him.

Brienes: Well, if you didn't feel closer to him, could you say that either your father or uncle, one of the two, had more of an influence on you or more affect on you when you were a child?

Spieth: No, it just simply meant that I had two bosses [laughter]. When I was with my uncle, he told me what to do; when I was with my father, he told me what to do. I can't say that I ever thought about the fact that one of them affected me more than the other.

Brienes: I know that people are so busy on a farm. I wonder if there was much time for books or reading. Did you have any of those influences on you before you went to school?

Spieth: Mother read some to us when she had time, but she had scant time for such things. But there were always books around.

Brienes: What kind?

Spieth: There were not very many. I can't even remember what they were when I was a small child, but there were a number of them in the house.

Brienes: Were reading and education highly prized by your uncle and father?

Spieth: Yes, both -- and by Mother, too. Uncle Dave read avidly. Neither man had much of an education; after all, they had both gone to a one room school for what I suppose would today be considered the equivalent of about a fifth grade education.

Spieth: Certainly the school terms were shorter and the teachers were not well trained. This was true even when I went to grade school.

Brienes: Did your parents get a newspaper?

Spieth: Yes, we always had a newspaper and we had a few magazines. I think The Saturday Evening Post was the main magazine. We also had The Louisville Courier Journal, which, of course, always arrived late because it came by mail. We did have a good newspaper.

Brienes: How did that compare with the people who lived around you, as far as you know?

Spieth: I have the feeling that we probably had more books than did most of the neighbors, but most of them had a newspaper. I think perhaps that there was more emphasis in our family upon reading.

Also, although the family was frugal from necessity, Mother and Dad did spend money on various items for their children. We had an American Encyclopedia and we had a piano. At Christmas time we received numerous presents. I early had a toy train, the engine of which was powered by a powerful clock type motor. William Couch once reminded me that he always came to our house after Christmas to play with the new items we children had received. He also noted that Mother and Father insisted that he be allowed to have ample opportunity to play with and investigate the new acquisitions. Our home was really a happy home and our parents were generous with what money they had and with their own time in giving their children a rich life. Both money and time were, however, scarce items.

Mother once told me that when I was young I was a persistent questioner and investigator of the world about me, and she observed that she almost dreaded the arrival of my brother David since she feared that then she would have two persistent children and she doubted if she would have the energy and time to cope with us as well as doing the multitudinous chores that a farm wife was burdened with in those days. She said that David and Emmett were neither as demanding nor as persistent as I was, much to her relief. In point of fact, as later years showed, both of my brothers have superbly competent minds but perhaps because they had an older brother to associate with they did not direct persistent questions of why? why? why? to Mother.

Brienes: What was your family's religious affiliation?

Spieth: As I said earlier, my Grandmother Wanamaker had been reared in the Catholic Church. I suspect, but I have no direct evidence, that the Spieths and the Schulte-Wiekings were Lutherans. But in our rural area there were no Lutheran churches. Perhaps at one time my Grandfather Spieth joined the United Bretheren Church.

Brienes: Is that Lutheran?

Spieth: No. The United Bretheren is a more fundamentalist church than is the Lutheran. When I was a child the only churches we attended were the Campbellite (Christian) Church or else a Methodist Church. It was easier for us to go to the Campbellite church because we could walk to it.

Brienes: Was religion important in your family life?

Spieth: Well, let me finish this. After we became older and we had better transportation (first of all a large surrey and later an automobile), we went to the Methodist Church. I think my parents considered themselves Methodists, and certainly my Mother was devoted to the Methodist Church in her later life. Religion did not play an overwhelming role in my life as a child. It was part of every day existence. It was not questioned but on the other hand it was not something that the family took with extreme seriousness. That is to say, my parents were often tired and sometimes very tired. We would then omit going to church. Father did not play a role in the church government or organization. I suppose, however, we would have been called a rather puritanical family.

Brienes: Why do you say that?

Spieth: Dancing and card playing were frowned upon. I was not allowed to have playing cards during my childhood or even through high school. We could have Rook cards but not official playing cards. In other respects, we were continental in that when we were eighteen months old we were given a drink of alcohol in the form of wine or if other types of alcoholic beverages were available we children could have a sip.

Brienes: Was this home-made wine?

Spieth: It was usually home-made wine. Of course, living in that area, the only whiskey that was available that anyone with any sense would touch was Bourbon. Later in my life when I was an adult

Spieth: I was given a drink of rye whiskey and I thought somebody was either giving me poisonous whiskey or something very bad because it was not "whiskey". The only whiskey was Bourbon.

Brienes: Did you distill?

Spieth: Oh no!

Brienes: You didn't have a still?

Spieth: No. There were a few moonshiners in the area, particularly during prohibition years but, no, we did not distill. We made our own wine. We drank beer, of course, usually at such times as the Fourth of July or at summer picnics.

Brienes: Would it be home brewed?

Spieth: No.

Brienes: When you were a child, did you get off the farm often?

Spieth: Occasionally. We had relatives -- my mother particularly -- who lived in New Albany, Indiana, and we would occasionally visit them.

Brienes: Did you go into town very much as a child?

Spieth: Very little.

Brienes: Did you leave the farm for any other reasons?

Spieth: No.

Brienes: With whom did you play?

Spieth: At school I played with the other children during recess; at other times I played primarily with two neighbor boys who were about my own age. One was a boy by the name of Willie Couch and the other was Ernest Orman.

Brienes: Were these your best friends?

Spieth: These were my closest friends.

Brienes: What sorts of things would you do with them?

Spieth: We would hunt, fish, and swim.

Brienes: What kind of hunting did you do?

Spieth: We hunted rabbits and squirrels in season, and in the winter time we would use dogs because Willie Couch had older brothers who had dogs trained to hunt possum and racoon. At that time in the history of the area, the wildlife population was probably at the lowest ebb that it has ever been. There is much more wildlife there now than then, and there had been much more in previous times. My father would remember the days when the passenger pigeons were abundant. He also could remember the days when there had been deer in the woods. But by the time I was a boy, the forest had been denuded, the land had been eroded and washed away, and the population had increased to the point where it had practically exterminated any wildlife except for squirrels and rabbits. Originally there had been many quail and there are now many there again. But not when I was a boy, for then they were rare birds. In fact, I guess my father's generation had almost exterminated the wild life of the area and there had been no conservation practices.

Brienes: Had you met these friends at school? Is that where you knew them, or you just knew them because they were close neighbors?

Spieth: The families knew each other; we knew the Orman family better than the Couch family when I was young because they lived close by. Mrs. Orman was a widow whose husband had been killed in a logging accident when Ernest was a baby. She had a very precarious existence, living in a small home that she and her husband had bought. The family was poor; today we would consider it poverty stricken. The Couch family was much larger. I think there were nine children in the Couch family and Willie was the youngest. They were also a poor family. The father had been plagued with illnesses of various sorts and he was not an energetic man. Actually, we three boys probably were joined together amongst other reasons because we belonged to the poorest families in the area.

But, also, we enjoyed each other and so I probably had more friends than did my younger brothers -- because it just so happened that when they came along, there were no parallel situations where there were youngsters of about the same age -- all within a year of each other as was true for Willie, Ernest, and myself.

Brienes: Did you keep in touch with these friends as you grew up?

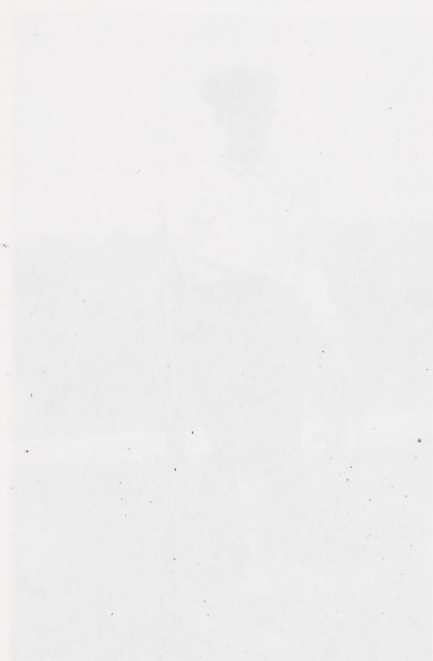
Spieth: Yes, I kept in touch with them. Ernest Orman eventually became a grade school teacher and then after a time he found that driving a cross-country truck was more rewarding financially than school teaching. He and his wife were much interested in dahlias and they began to grow them in greenhouses. Apparently he used a chemical to treat the dahlias and the chemical was carcinogenic. Both he and his wife, within a couple of years of each other, died of pancreatic cancer. He has been gone about twenty years.

Willie Couch drifted around as a workman primarily. When I was in college, I induced him to join me at Indiana Central College where I was a student. He had been out of high school a couple of years, but he did come and spent one semester in college, long enough for him to decide that he simply did not want to go to college. Eventually he ended up in Oregon working in a lumber mill. He retired a few years ago and about three years ago he came to Davis for a heartwarming visit. Now he is living in Charlestown, Indiana, and usually communicates at Christmas.

Harman Spieth - about 3 years old

with his Collie Teddy

Harman Spieth at age two



Harman Spieth - Schoolboy Hunter



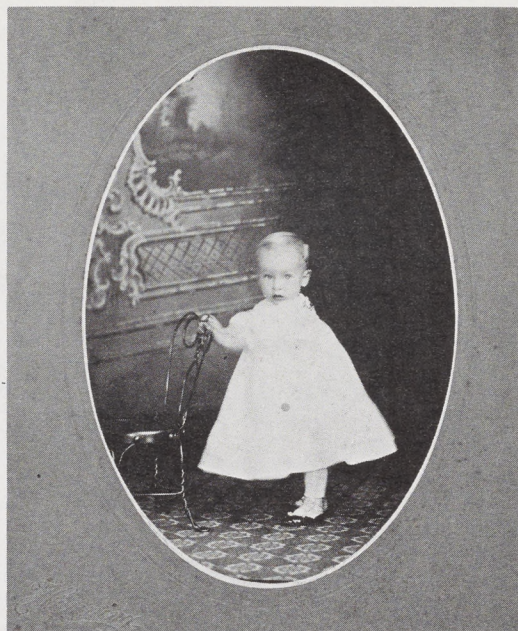
Sylvan Grove School - Nov. 1, 1910

Center back row - Mrs. Sink, Teacher

Bottom row - Third from right: Harman Spieth



Herman Spieth - about 3 years old,  
with his Collie Teddy



Herman Spieth at age one



Herman Spieth - Schoolboy Hunter



Sylvan Grove School- Nov. 1, 1910  
Center back row: Greta Sink, Teacher  
Bottom row third from right: Herman Spieth

One-Room School

Brienes: Do you remember when you started school?

Spieth: Yes. I started the first grade at the age of five.

Brienes: Would you tell me about your first school experiences? Where you went?

Spieth: In 1910 I went to a one-room school named Sylvan Grove. My teacher was Greta Sink, the daughter of our neighbors on an adjoining farm. I have only one vivid memory of that year. We all wore the kind of clothing that farm children wore in those days, usually overalls and a sweater. When I arrived for the final day of school that year, all the children were dressed up in their best clothing except for one little girl and myself. She lived within a quarter of a mile of the school and went home at lunch time, changed her clothes, and came back -- so I was then the only one in my everyday clothes while all the rest of the children wore their Sunday clothes. I must confess that I was crushed.

Brienes: I don't blame you [laughter]. That was a terrible thing. What was it like to go to a one-room schoolhouse that had eight grades in it?

Spieth: When we arrived at school, we left our coats in a little ante-room and then entered the large room of the school which had a blackboard across the wall at the opposite end from where we had entered. Two rows of desks were on either side of the center aisle; smaller desks were on the left side and larger ones on the right side. A coal burning pot-bellied stove was in the middle of the room between the two rows of desks and about half way from the front to the rear of the room, with the teacher's desk in front of the blackboard. There was a back door in the middle of the back wall so that if a fire or some emergency occurred we could escape that way. In front of the teacher's desk was a recitation bench about twelve feet long. The older children sat on the right side and the smaller children sat on the left side of the room. I remember that I sat on the inside row of the left side about two-thirds of the way back, and I suppose there were eight seats, one after the other, so I was probably the fifth or the sixth person in the row. The teacher would call each class up in turn to sit on the bench and recite, while the rest of us were supposed to be studying, or we'd go to the blackboard to write out arithmetic problems or English sentences or whatever else we might be studying.

Brienes: How well equipped was the school? Did they have many books? Was there much equipment in the school?

Spieth: It had no books except for a few textbooks.

Brienes: Do you remember what textbooks you had?

Spieth: I have no memory of the textbooks. Of course, with eight grades to teach, the teacher did not have a great deal of time to spend with any one.

Brienes: Were you there for the whole eight grades?

Spieth: I was there for seven years since I "skipped" the second grade.

Brienes: Was Miss Sink your teacher for all these years?

Spieth: No, she was the teacher only the first year. Her sister lived in Indianapolis, and Miss Sink joined the Indianapolis school system the following year. We had a succession of teachers during the years that followed her departure. Some of them, like Miss Sink, had graduated from high school and then attended a three-month summer session at a normal college. Eventually I had one teacher, a Miss Rogers, who had had one year of college but the man who was our teacher during most of the years had had no college training whatsoever. He had, I think, earned a high school diploma. He was a rather inept farmer in our area who taught school for the additional money to be earned, which was not very great.

During the year when I started, like all of the other years, the school session ran for six months. Miss Greta Sink received for those six months the sum of \$300.00, or \$50.00 per month. Later I remember hearing two teachers talking to each other, when a visiting teacher came by one day. I was somewhat older, perhaps in the third or fourth grade. They were congratulating each other because their salaries had gone up to \$60.00 a month, so they made \$360.00 for one year. Even in those days, this was not a large income.

Brienes: What sort of a student were you?

Spieth: Oh -- average.

Brienes: Just average?

Spieth: Certainly just average. The only thing I was good in was history, and I happened to enjoy it. I became known as the history expert

Spieth: at school and particularly the expert on the Civil War which intrigued me. But certainly otherwise I was just an average student.

Brienes: What intrigued you about the Civil War?

Spieth: I do not quite know. Of course, I had heard older people talking about it and when I was a boy there were people who had either been children during or actually involved in the Civil War. We were on the Ohio River, which was the border between North and South (the Mason-Dixon Line), and many of the students in our classes belonged to Kentucky families that had moved to Indiana. There had always been latent under-the-surface tension between the North and the South, and it still existed. Furthermore, Abraham Lincoln had lived for a period of time only about seventy miles distant. For some reason I enjoyed reading about history and somehow I picked up a book on the Civil War which was intriguing.

Brienes: Did you have any experiences in grade school with science? -- the natural sciences?

Spieth: None whatsoever.

Brienes: Was there any teaching of science?

Spieth: None. It was reading, writing, and arithmetic. That was it.

Brienes: I want to go back to the people of the area in which you lived before we pick up your schooling again. The neighbors around you came from different backgrounds generally than that of your own family. Could you explain in more detail in what way they were different from your own family?

Spieth: They were not recent immigrants. They were old American families whose ancestors had come to the United States in the previous centuries. Then the families or their descendants had moved gradually westward, apparently from the eastern portion of the country. I do not have any exact data on them except that their names were mostly English and Scotch-Irish.

Brienes: Yes. Mostly Scotch-Irish.

Spieth: Probably most of them came either down the Ohio River or through Kentucky.

Brienes: Let's see how they differed from your own family. Let's just take something like farming techniques or family traditions. What would you say about that?

Spieth: In general, their farming traditions did not emphasize the maintenance of fertility and organic material in the soil. For example, fertilizers were available but were not used to as great an extent as they are today. Moreover, these people were not concerned with the careful husbandry of organic materials such as manures and cover crops. For example, the land my parents purchased had been farmed but not carefully husbanded. As a result, it was eroded and the fertility had been lost.

Brienes: Then there was a sharp distinction between what your farm looked like and what neighboring farms looked like?

Spieth: Eventually yes. When my parents started out, their land was worse than that of most of the neighbors. But as time went on, our land was improved and it unquestionably had become the most productive farm in the area by the time I went to college.

Brienes: Well then, as the difference between your farm and the Scotch-Irish farms became evident, was there some reaction on the part of the neighbors toward your family? Did it make things difficult for you in some way?

Spieth: There were little things. We simply were not a totally accepted family in the community. Of course, when I was a small boy, World War I occurred. During that period the pressure against individuals of Germanic descent was intense. I can remember that during those days my father never went to the front door at night unless he had a gun in his hand.

Brienes: Had you ever been threatened yourself when you were a child?

Spieth: I was not often threatened, but I was teased about being a German.

Brienes: Did the neighbors differ from your family in politics?

Spieth: Yes. Clark County was totally dominated by the Democratic party. Why my parents were Republicans I have no knowledge. They were. Furthermore, my father was much interested in the Bull Moose movement of Theodore Roosevelt. To the best of my knowledge, as long as I lived in Clark County, no official was elected unless he was a Democrat. And furthermore, there was a party organization that was just as effective as Tammany Hall in New York.

Brienes: Did being on the outs politically ever hurt your family?

Spieth: I don't think it hurt the family directly.

Brienes: Do you think you would have had more friends during your childhood if your family had not been somewhat unique in their attitudes and backgrounds?

Spieth: No, probably not, but I suppose there were probably two reasons why I had few companions. One was that we were poorer than the rest of the families and, secondly, other youngsters my age, except for Orman, did not live close to us. In the days before the automobile, three miles was a great distance.

Brienes: So you think it was mainly just logistics? -- you just couldn't get over to them?

Spieth: Lack of proximity was certainly involved.

Brienes: I know that in the short biography you started to write, you indicated that you were different from your neighbors also in terms of your social attitudes toward blacks.

Spieth: Yes.

Brienes: Could you tell me about that?

Spieth: The area in which I lived was completely segregated. The county was divided into townships and we lived in Union Township, a poverty stricken area to say the least. There used to be a saying that crows flew over Union Township but they never landed there because there was nothing to eat. In Union Township a black person could work during the day time, but he could not sleep in the township at night. Furthermore, if such a person did work there, he was treated in a segregated manner. Occasionally my father would need assistance and hired blacks from these adjoining townships which permitted blacks to be inhabitants. We always treated blacks as if they were fellow human beings. That is to say, when meal time came, they were fed just the same as a white worker or a member of the family.

Also, there was a Jewish peddler by the name of Herman Hyman who periodically came through the countryside to sell items which were difficult for the housewives to get at the stores in town. When I was a small lad, he carried the merchandise on his back; later he had a little wagon, and eventually in the final years of his life he actually had an automobile. Of course, such peddlers are no longer in existence; with the development of modern transportation, there is no need for them. But at that time there was a real need. Hyman always made our home his headquarters because no other family in the area would give

Spieth: him sleeping quarters. This did not particularly endear us to some of the neighbors. They resented our treatment of blacks and of Herman Hyman who became a close personal friend of the family.

Brienes: I think it is interesting that your family, as you wrote, was the odd family in the area. You did stand apart from the rest and you must have been conscious of it, also.

Spieth: No.

Brienes: You weren't?

Spieth: I wasn't conscious of it as a child. I really was not.

Brienes: But of course it made an impression on you because you went on to write about it.

Spieth: Well, it made an impression on me later as I looked back on my childhood but it did not when I was going through it.

Brienes: Well, looking back, do you think the fact that you were an odd family in the area, you were different -- do you think that played any role in the formation of your own character?

Spieth: I doubt it seriously.

Brienes: You have told me that the school population kept dropping because people kept leaving the community. Why were people leaving?

Spieth: The farms were rather unproductive even when the elders were still alive, and there really was not the opportunity for additional people to make a living. When children reached adulthood and married, most of them left. Maybe one son would stay on the farm with his father. Some of the boys who did not marry stayed with their parents. The rest of them found employment elsewhere.

Brienes: When you were a boy, did you have any thoughts of remaining in farm life? -- either taking over the farm or being a farmer yourself?

Spieth: No, really never.

Brienes: Why not?

Spieth: I did not dislike farming but it never occurred to me that I wanted to live on a farm for the rest of my life.



The Spieth Farmhouse

Stony Point

1920



The Spieth Family on a typical work day  
at Stony Point Farm

1922

Standing: Herman, Mother, Dad

In chair: Uncle Dave

Kneeling: Emmett

Bottom row: Teddy II and David

Brienes: But in fact when you were a child, what about your parents' plans for you? Do you think they gave any thought to what you were going to be doing?

Spieth: They hoped I would receive an adequate education. There was no question about that on the part of either Father or Mother. My father had always regretted that he had not had an education. I suppose they expected that I would be a school teacher -- a grade school teacher. In fact, that is why I went off to college -- to become a grade school teacher. There was no thought at the time I went to college that I would attend for more than one year, because that would be enough to give me a teaching credential, after which I would probably return to live in the community.

Brienes: But not be a farmer?

Spieth: But not be a farmer.

Brienes: Let's go back and pick up another thing that we didn't cover adequately last time -- and that was the reading material that you had available to you and the kind of reading you did when you were a youngster on the farm. After the tape went off last time, you started telling me about Uncle Dave's Wild West Magazine. Could you go back and tell me about that?

Spieth: We did not have many books. We had newspapers and, as I said, we had a few magazines, and I think the major one was The Saturday Evening Post. But my uncle brought home this Wild West Magazine and it was, I suppose, the Playboy of that age. There was in it a little advertisement about the Haldemann-Julius books which were published in St. Louis and which sold for ten cents each.

Brienes: Reasonable! [laughter].

Spieth: Have you ever seen any of these Little Blue Books?

Brienes: No. Do you mean really tiny?

Spieth: Yes. About two by four inches in size. I think there are a few in the campus library.

Brienes: In Special Collections?

Spieth: I bought a number of those Little Blue Books.

Brienes: Why were they called Blue?

Spieth: They had soft covers which were blue in color. They were condensations usually of famous books or articles, and the one that impressed me most was Huxley's Defense of Darwin's Theory of Evolution.

Brienes: Do you recall any others you read?

Spieth: I cannot remember precisely, but some of them were history books because I was always much interested in history. I suppose over the years I purchased a couple of dozen of these Little Blue Books.

Brienes: Do you still have them?

Spieth: No.

Brienes: Too bad.

Spieth: It is, indeed, too bad.

Brienes: Well, tell me about the Huxley Blue Book.

Spieth: It was a defense of the theory of evolution and it was so rational that I accepted it.

Brienes: How old were you when you read that, do you think?

Spieth: I think I was about twelve.

Brienes: Had you ever heard of evolution before?

Spieth: No.

Brienes: Why did you send away for it?

Spieth: I don't really know; I suppose the title intrigued me.

Brienes: And you liked it because it seemed rational?

Spieth: Yes -- a great explanation.

Brienes: Well, if that introduced you to evolution, did you immediately follow up on that with some additional reading in the field of biology?

Spieth: No. I did not because I was more interested in history, I must confess. I had full intention when I went to college of majoring in history.

Southern Indiana High Schools

Brienes: After you left grammar school -- grade school -- there was a decision for you to go to high school, wasn't there?

Spieth: Yes.

Brienes: Was high school something that was required by law or was it something not many people did? This was a decision you really had to think about?

Spieth: I cannot remember whether at that time there was any legal requirement for attending high school or not. There certainly was shortly thereafter. But there was no question in my family about my going on to high school -- if I could be admitted. Union Township had no high school, so I had to go to one in another township; to do that I had to take a qualifying examination. I took the examination and passed it. Father saw the results and with a rather pleased smile on his face said: "You did very well, son".

Then came the question of where I should go. There were two possibilities. The closest one was at Charlestown, four miles away. The next one was at Henryville, seven miles away. But during the spring when I was in the eighth grade, the Charlestown High School burned down and it was clear that the new building would not be finished by fall and that school would be conducted in a residence which had been abandoned -- a fairly large residence but very cramped for the number of students that would be in attendance. Henryville, on the other hand, had a new high school building that had been erected, I think, within the past five years. It was possible to get there through one of three ways: I could walk three miles to Memphis, Indiana, which was the nearest village and consisted of about seventy people, two grocery stores and a blacksmith shop.

Brienes: No traffic light [laughter]!

Spieth: No traffic light there. At Memphis I could catch an interurban which ran between Jeffersonville, Indiana, and Indianapolis. It stopped for passengers much as a streetcar does; there were stations about every two or three miles apart, depending on the size of the population along the tracks. So after walking to Memphis, I could then take the interurban into Henryville and that put me within a quarter of a mile of the high school. Or if walking became impossible, as it did in the winter time when the road became muddy, then I could drive or ride on a horse to Memphis and put it in a stable for the school day, taking the interurban on

Spieth: to Henryville. Or, third, in good weather in the fall and spring I could ride a bicycle all the way to Henryville.

So it was decided (as you can anticipate and as I should have said earlier) that I should go to Henryville. And I went to the Henryville High School for three years.

At the end of my junior year, when I was ready for my senior year, my younger brother David was ready to start high school. By that time a new high school building had been completed and, since there would now be two of us going to high school, I transferred to Charlestown and spent my senior year there. The two of us drove a buggy every day.

Brienes: You were closer to Charlestown?

Spieth: To Charlestown it was only four miles.

Brienes: Now could you describe the Henryville High School? Just the physical plant -- what was it like? You said it was relatively new.

Spieth: The school consisted of a single building and was not large. I cannot remember exactly how many students were there -- probably about fifty or sixty in all. I vaguely remember the brick building, two stories -- of which the lower floor was used for a grade school and the upper story for high school students. There was a large room with a stage at one end where students could perform; the room could also be used for general meetings, and we used it as a study hall. Then there were three rooms for classes.

Brienes: How many teachers were there?

Spieth: There were three teachers.

Brienes: For the whole high school curriculum?

Spieth: For the whole high school curriculum there were three teachers.

Brienes: Did they make much of an impression on you?

Spieth: Mr. Dickson was the principal and I can remember him as a slim, fairly tall man who was somewhat austere but apparently fairly competent. My other teachers I really have no marked memory of. High school was not really something that had much influence on me as a student.

You see, I would have to get up at not later than five-thirty or six in the morning to get to high school on time. Then I would

Spieth: come home in the afternoon, getting there about five-thirty or six. Thus much of the day was spent in traveling. When I arrived home there were chores to be done and it was usually eight o'clock before all of those were finished and what we called supper was over. Then I could study at the dining room table with a kerosene light -- for what little studying I felt up to doing.

But I really had little time for studying. As soon as winter came we were usually engaged in trapping animals, particularly skunks and rabbits. I had done that, too, in grade school. The skunks were sold, for their skins were valuable. When I went to high school I would go through Memphis where I could always sell freshly caught rabbits.

Brienes: On your way to school?

Spieth: Yes. So, when I was trapping, I usually got up during the winter months about four o'clock in the morning, and went out to run my traps before I got ready to go to school. By the time I got to school, I frankly found the course work not very interesting.

Brienes: To what do you attribute that?

Spieth: I do not know all of the factors but, of course, one was the simple fact that I was so busy with trapping and my home chores and my home life. An additional thing was that I had no really close relationships with any of the students in the high school because I arrived in the morning just before classes started and I left immediately after school was finished. I participated in little of the so-called extracurricular activities.

Brienes: Would most of the students have come from the same kind of rural background you did?

Spieth: No. Most others lived much nearer the school. Henryville was a somewhat larger town than Memphis and most of the students lived either in town or within two or three miles of the school.

Brienes: Did you have a personal reaction about the fact that you again felt like an odd man out?

Spieth: No. It didn't bother me.

Brienes: It wasn't much of a problem? Were you popular as a student -- among other students when you were there with them?

Spieth: Oh, I don't know that I was unpopular. I certainly was not a leader. Amongst other things I was small. I was rather young

Spieth: since I had started to grade school at five and had skipped a grade -- but more than that, I was the smallest boy in the class. I was the smallest boy in the whole high school.

Brienes: Did you grow any after that?

Spieth: I did my growing afterward, yes. In fact, I was always the smallest male in my high school class, both at Henryville and later at Charlestown. I grew about six inches during my first year of college.

Brienes: That must have hurt [laughter]!

Spieth: There was a Boy Scout troop while I was in high school in Henryville and I joined it, and I occasionally went on hikes and participated in their activities, which meant that Father and Mother had to free me from my weekend duties and I would go the same route again to get to the Scout meeting. This was the greatest extent of my extracurricular activities with members of my high school body.

Brienes: Did your academic interest still remain history?

Spieth: Yes, it did.

Brienes: Do you recall doing more reading then in it?

Spieth: Yes, I read various books on history, but I cannot recall specifically what I read.

Brienes: What about the facilities at this high school? Was there much of a library?

Spieth: There was no library.

Brienes: No library?

Spieth: No library.

Brienes: Was science taught?

Spieth: No. No science.

Brienes: What was taught?

Spieth: English, Latin, mathematics and I think social studies.

Brienes: What were most of the other students there for? What were they going to use the high school education for?

Spieth: Many of them were going to high school because that was the thing that was beginning to be done after finishing grade school. I do not know what their careers have been since high school. Most of them did not proceed farther in their education. Many of them dropped out during high school. I think maybe less than five percent ever engaged in any further educational activities.

Brienes: Now what you said about Henryville High School -- does that also go for your senior year which was over at Charlestown?

Spieth: Charlestown was a somewhat larger high school. They had more teachers and more academic offerings; for instance, they had manual training which was not taught in Henryville. I took manual training in my senior year at Charlestown. One had to meet certain specific requirements for graduation, but over and above those, one could take other courses and I was able to fit in manual training.

Brienes: The switch from Henryville to Charlestown -- was that a decision your father made?

Spieth: Yes, my parents made that decision and I was perfectly willing to do it. I had no real tie to Henryville. Willie Couch had gone there but Ernest Orman went to Charlestown during his freshman year, then to Henryville for his sophomore year, as I remember, and then returned to Charlestown.

Brienes: Do you remember any of the teachers? Can you make a distinction between Charlestown and Henryville in terms of impact on you?

Spieth: No, really not. I think in general the teachers were better in Charlestown and I enjoyed my senior year there even though I was coming in as a new student and thus was not within the group that was established there. I did make a number of friends among them.

Brienes: Did you get involved because you were nearer the school?

Spieth: No. In fact, I did less that year. I was never there in the evening for social activities.

Brienes: What year was it when you graduated from high school?

Spieth: I graduated in 1922. I was sixteen years old.

Brienes: So in the spring of 1922 you were out of high school.

Spieth: Yes.

Brienes: their minds was that going to be the first step to something else? What did they think?

Spieth: I think in their minds they felt that would be a step that would enable me to become financially independent and then I could proceed according to my own desires.

Brienes: I got the feeling that they really didn't aim you in any direction.

## II HIGHER EDUCATION

Spieth: Except to be a grade school teacher.

Brienes: A Fundamentalist College was simply a way to put you in your own direction -- but did they have any career goals that they wanted you to pursue?

Brienes: Could you tell me about your decision to go to college?

Spieth: My parents had decided by that time that family finances were of such a nature that I could go to college for one year to get a teaching credential. I enrolled in Hanover College at Madison, Indiana; it's on the Ohio River and not too far away from home; indeed, it was the closest college in Indiana to my home.

Brienes: That's why it was picked?

Spieth: That was probably the reason why it was selected. I think some of my high school teachers were Hanover graduates. At any rate the name Hanover was well known in our high school. That summer, however, my first school teacher, Greta Sink, came back after she had been attending a summer session (as teachers do, you know) at Indiana Central College in Indianapolis. She suggested to my father that Indiana Central College would be a better place for me than Hanover. Now why she did, I do not know, but at any rate I went to Indiana Central instead of to Hanover.

Brienes: How much money was it going to cost your family to send you to college?

Spieth: Well, I don't think the family really knew but they figured it would be something like five or six hundred dollars.

Brienes: That would be with living expenses?

Spieth: Everything.

Brienes: Bargain [laughter]. So now they let you take a one year teacher training course? Did they expect that to be your career or in

- Brienes: their minds was that going to be the first step to something else? What did they think?
- Spieth: I think in their minds they felt that would be a step that would enable me to become financially independent and then I could proceed according to my own desires.
- Brienes: I get the feeling that they really didn't aim you in any direction very much.
- Spieth: Except to be a grade school teacher.
- Brienes: Well, but you said that was simply a way to put you on your own and head you off in some direction -- but did they have any career goals that they wanted you to pursue?
- Spieth: No.
- Brienes: Did they want you to get off the farm? Was that important to them?
- Spieth: No, I don't think they did. I suspect that my dad thought I'd be back in the summertime, of course, and I'd live at home for a time.
- Brienes: Did you have any input into this decision?
- Spieth: As long as I can remember I did want to go to college.
- Brienes: You did want to go?
- Spieth: Yes, I wanted to go to college. I do not know exactly why.
- Brienes: I can't figure out why. You didn't like high school.
- Spieth: No, I did not particularly care for high school.
- Brienes: You think it might have been simply the general attitude your family had about learning, about education?
- Spieth: I think so.
- Brienes: Okay, let's get you over to Indiana Central. Where was that located?
- Spieth: It is located in what at that time was a little village known as University Heights just outside the southern boundary of Indianapolis, Indiana.

Brienes: How far was it actually from Indianapolis itself?

Spieth: I do not remember what size Indianapolis was at that time. It probably was not as big as Sacramento is today, but it must have encompassed a hundred square miles at that time.

Brienes: Being at Indiana Central, did that essentially put you in Indianapolis or were you still far enough away from it that you weren't living in it?

Spieth: We could get to Indianapolis with ease on the interurban -- because that same interurban that I went to high school on in southern Indiana came through University Heights. By that time there were also buses, and so we could get to downtown Indianapolis without any difficulty.

Brienes: Could you describe Indiana Central when you first went there? Do you recall the first time you went there?

Spieth: Yes. Indiana Central then consisted of one major building which housed all of the academic and administrative offices, the library, the auditorium, and the classrooms. There was one dormitory for girls and one for men.

Brienes: It was a coed school?

Spieth: Yes. They had recently built a gymnasium consisting of a basketball court with a few lockers and bleachers. It was a wooden building, a little flat one-story wooden building. The student body as I remember numbered one hundred and seventy-five. The institution was supported by the United Brethren Church which was one of the fundamentalist churches, now joined with the Evangelical Church. About half of the student body intended to become ministers. Most of the other students were seeking teaching credentials.

Brienes: Does that mean that half the student body was just going for one year?

Spieth: No. They were going for either one year for elementary teaching credentials, or more than that if they wanted to be high school teachers.

Brienes: I see.

Spieth: And if they were going to be ministers, most of them were planning on four years.

Brienes: What degree did you get at the end of four years?

Spieth: A.B. was the only degree offered.

Brienes: But if you went for one year, was there some kind of a degree that you would get, or was it just a certificate for teaching?

Spieth: One year just got an elementary teaching certificate, or teaching credential as it was called.

Brienes: Now that meant that your course work -- studies for that year -- must have differed from that of the students going for four years, didn't it?

Spieth: Somewhat, but the only difference was that I had to take a year of Education.

Brienes: Along with your other courses?

Spieth: Along with the other courses, yes. The other courses were regular academic ones. I remember that the first year I took Education, History, English, Zoology, Bible one semester and Philosophy the other semester. We took only five courses.

Brienes: Before we get into your course of study, let me go back to what you said about the church affiliation. I'd like to pick up what I read in part of your written autobiography when you spoke about the effect these divinity students had on you. It was very interesting. Would you tell me about that?

Spieth: I found some of them to be pleasant scholarly people. Most of them, I regret to say, seemed to be more politically oriented in the sense of being concerned with the church politics. Also most of them were strict fundamentalists. They found those of us who were not divinity students not particularly attractive, I think. And also I had the feeling that many of them did not have excellent intellects.

Brienes: You wrote that your experience there seemed to have for at least a period made you anti-religious.

Spieth: It did. But this was only partially because of the student body. We went to chapel every day for a half-hour, and during the middle of the year we had a revival meeting every night for two weeks.

Brienes: You're talking about your first year?

Spieth: That was true for all four years.

Brienes: Oh, there would be a revival each year?

Spieth: The students were supposed to attend the revival meeting. Although I had always accepted religion as a normal thing in one's life, I found this combination of people whose actual integrity I came not to appreciate highly and their fundamentalist attitude about religion was disturbing to me. I frankly became agnostic.

Brienes: And this would have been your first year or two of college, at least?

Spieth: It was all through my college years and then it continued for a number of years afterward.

Brienes: How did the background of the students you went to college with at Indiana Central differ from the background of your high school and grade school students? Fellow students? A new group of people you were meeting?

Spieth: It was a new group of people and some of them came from backgrounds not too dissimilar from my own farm background. But many of them came from urban backgrounds and I'm sure they were more sophisticated than were my contemporaries in high school.

Brienes: What were your living arrangements there?

Spieth: We had dormitories; there were two students to a room.

Brienes: Did you get into Indianapolis much?

Spieth: I went into Indianapolis a fair amount of time on weekends, because I had some distant relatives, the Neilsons, who lived on the south side of the city. I had known of them from my childhood. In fact, my parents and I had visited in their home once while I was in grade school and once when I was in high school. Mrs. Neilson was related to my mother's family -- the daughter of George Schrapp who was my grandmother's brother.

Brienes: So you had been in Indianapolis before?

Spieth: Yes.

Brienes: I had gotten the impression that you really didn't visit. Did being there now on a much more steady day-by-day basis, or right

Brienes: near it -- did you get to know more about that city? Or did it have an impact on you?

Spieth: It had some impact on me in that I found myself able to get a job working on Saturdays as a stock boy in a Woolworth store in downtown Indianapolis. Although it was frowned on, occasionally some of the students went to a movie in the city -- and I was one who did this. Sometimes I visited my relatives in Indianapolis, and occasionally I went to a church that was more like the kind I had known as a child, a community church rather than one tied into a college. Since I was not a United Bretheren, I felt perfectly free to go to a Methodist or a Baptist church.

Brienes: In the years that you were at Indiana Central, were there any other facilities in Indianapolis that you came to use that wouldn't have been available when you were a farm boy? I mean, here you are in an urban area exposed to all kinds of new things. I'm interested to know what you were learning or coming into contact with off the campus -- just because you were in Indianapolis.

Spieth: Very little, except what I have already told you.

Brienes: Let's look at the teachers that you had at Indianapolis -- at Indiana Central.

Spieth: The Education professor was a man by the name of Marshall. I knew both his son and his daughter. Mary was a pleasant girl who died just recently. The son was a competent man, a bit older. He, I think, was a junior or a senior when I was a freshman. Marshall was a competent but not an exciting teacher. And I frankly found the course in Education, not because of Marshall himself perhaps but because of the content, not in the least stimulating. English I had always had difficulty with in high school and while I worked at it I was not really entranced by it. Bible I enjoyed.

Brienes: Who was your English teacher, by the way? Do you remember?

Spieth: It was Miss Hessler.

Brienes: Was she a good teacher?

Spieth: Yes.

Brienes: I'm sorry, you were going to talk about the Bible class.

Spieth: He used it on the students to a certain extent, but he also used it on his peers (laughter). And I would say he was not

Spieth: Dr. Long was the Bible teacher and although he was a fundamentalist he was an excellent teacher. Cummings was the Philosophy teacher and was a delightful man. He was an idealist philosopher. I appreciated his course. But the course I really appreciated was Zoology, with Morgan.

Brienes: I know through reading your autobiography that your Zoology teacher was apparently a very, very great influence on your life, and I'd like to know more about both your teacher and what you learned with him. Why don't you tell me who was this Morgan?

Spieth: His father had come to Indiana from Kentucky, and the scuttle-but (which probably was true) was that he had left Kentucky because he had killed a man; in those days if you could get out of the state it was possible to avoid any penalties.

Spieth: Will Morgan himself had grown up in the Indianapolis area and he had been quite a vigorous young man. In his youth he quickly got himself an automobile and was quite the young man around town. But he engaged in a race with the interurban that I spoke of earlier and wrecked his car. The car was demolished and he lost a leg. So all through the years I knew him, he had an artificial leg from about the middle of the thigh down.

Brienes: I see.

Spieth: He was a graduate of Indiana Central, probably because of the Proximity of the school to where he had grown up. When I was a beginning student, he did not have his doctor's degree although he had done graduate work and was working toward his degree which he finished during my senior year in college.

Brienes: What was his religious background?

Spieth: His family had been members of the United Brethren Church, but as far as he was concerned he was an agnostic.

Brienes: I see.

Spieth: He had known the faculty and their families for many years, so he knew all about the intimate details of their lives. Unquestionably he was one of the best of the faculty. He had high standards and a sharp tongue.

Brienes: Whom did he use his tongue on -- students?

Spieth: He used it on the students to a certain extent, but he also used it on his peers [laughter]. And I would say he was not

- Spieth: one of the beloved members of the faculty in his younger days [laughter].
- Brienes: In other words, he would let you know what he thought of the other people on the faculty?
- Spieth: No, not really. Eventually when I was an upperclassman and later when I was a graduate student, he told me many things about the faculty and their personal lives and backgrounds that the ordinary student would not have known.
- Brienes: You took Zoology the first year?
- Spieth: Yes.
- Brienes: Do you remember the early days in this classroom? Zoology meant nothing special to you at all?
- Spieth: Zoology meant nothing special to me, and the first exam I flunked completely.
- Brienes: Why did you flunk it?
- Spieth: Obviously I had not studied sufficiently -- or didn't know how to study. I probably had never learned how to study.
- Brienes: Now you weren't a student that flunked. You were a pretty good student in high school.
- Spieth: Well, no. I almost flunked Latin and I did flunk Geometry and had to take it over again. I was a C-plus student in high school.
- Brienes: I see. So it wasn't any great devastation to you to flunk on the Zoology exam, was it?
- Spieth: No, except that Morgan told me I'd have to do better if I wanted to stay in his class.
- Brienes: How did you react to that?
- Spieth: Well -- I liked the course so I got to work.
- Brienes: How did you do in it?
- Spieth: I got an A.
- Brienes: By the end of this first semester, did Morgan take any special interest in you, do you think?

- Spieth: I don't know, but during the second semester he did. One day he called me into his office and asked if I would like to serve as his undergraduate assistant the following year. He told me that he could pay me \$125.00 for the year.
- Brienes: Now, once you recovered from flunking the first test, you went on and did well in that class. Were you his best student by the end of the year, do you think? Did you stand out?
- Spieth: I suppose I was the best student in the class by the end of the year.
- Brienes: Did you find your interest in Zoology growing over that year?
- Spieth: Yes.
- Brienes: At the end of the first year, had you made any tentative decisions about what you were going to do then?
- Spieth: Yes; by that time I knew I was going to go on and finish college, with a major in Zoology.
- Brienes: Did you have to go back home and discuss this with your family? The family was paying your way.
- Spieth: Yes, the family was paying my way but I had made some money working down town that year.
- Brienes: Is that the Woolworth job?
- Spieth: Yes, the Woolworth job. Also I would have \$125.00 coming in the next year from the assistantship. The family decided that they could afford to make up the remaining costs for me to continue.
- Brienes: Did you have to sit down and talk with your family?
- Spieth: Yes, certainly.
- Brienes: What exactly did you tell them you wanted to do?
- Spieth: I told them I wanted to finish college and major in Zoology.
- Brienes: With the aim of doing what?
- Spieth: Becoming a high school teacher, probably.

Brienes: Okay. Would that have required you to do anything else but finish the four years for a degree?

Spieth: Probably not, since I already had a teaching certificate -- the state's requirement.

Brienes: But did you have to have a B.A.?

Spieth: One didn't have to have a B.A. but it was helpful to have it.

Brienes: So at the end -- you had developed your academic interest; -- it was clear to you at the end of your first year.....?

Spieth: Yes, that's right.

Brienes: What about your second year?

Spieth: The second year I had to begin to pick up the things I had not taken the first year when I had been in a teacher training program. But most of the courses I had taken served to meet general graduation requirements. The curriculum was much more limited in those days. The second year I had to take a foreign language and start Chemistry. I continued Zoology, taking Embryology and Comparative Anatomy.

Brienes: Morgan was teaching all of these courses?

Spieth: Yes, Morgan was teaching these courses. He was the only Zoology professor, and there was only one Chemistry professor. I also began French.

Brienes: How did you do in these courses?

Spieth: Well, I managed to get a C- in French. And I think I got a B or B+ in Chemistry. I did not have too much trouble with Chemistry.

Brienes: Did you enjoy Chemistry?

Spieth: Yes, I enjoyed it.

Brienes: Was there a point where Chemistry would be vying with Zoology for you?

Spieth: No, there was no real question about that. I might add one interesting thought about the first year. I had a teacher by the name of Holman in History and I found him probably the poorest teacher that I had during my four years in college. The administration

- Spieth: later noted his inadequacies as a teacher and put him in a minor administrative position, reducing his teaching load. But Holman had completely turned me off from being a History major, you see. The superb Zoology professor made me a zoologist.
- Brienes: What do you think would have happened if Morgan had been your History teacher and Holman the Zoology teacher?
- Spieth: I would have unquestionably, I think, gone back to becoming a grade school teacher.
- Brienes: So that first year at Indiana Central -- that was your deciding year? You were TA-ing, you said, the second year. What kind of work did you do as a teaching assistant?
- Spieth: I took care of the freshman laboratory.
- Brienes: Was that an educational experience?
- Spieth: I learned more that year about Zoology than perhaps I had learned the previous year because I had to answer the students' questions and help them.
- Brienes: Was the knowledge you needed to be a TA something you picked up the first year?
- Spieth: Yes, but I learned more the second year.
- Brienes: Did you find being a TA forced you into doing additional work on your own?
- Spieth: Oh, a great deal. I did a lot of reading and studying.
- Brienes: What would you be reading? What books? What kinds of material?
- Spieth: Various textbooks of which there were a few around in the library and in Morgan's office, the laboratory manuals and the like, and also doing the dissections over again myself and then helping the students do dissections. I [laughter] really learned something about zoology, I can assure you.

Some of the things I learned I could have done without. For instance, one day we received a shipment of live bullfrogs. These were to be used as dissection material by the students. Morgan told me to over-etherize them, thus causing them to die; then I was to cut open their abdomens, spread them out for a time until they had "set", and then immerse them in a large container

- Spieth: of preserving fluid. Late in the afternoon I dumped them in a large can, poured ether over them, and closed the can. After about half an hour I pulled them out, cut them open, and placed them on trays. Then I took off for dinner at the dormitory dining room. When I returned an hour or so later, I found that the ether had not been sufficient. The poor frogs had recovered from its effects and were hopping about with their insides hanging out. It was a sad sight and I was truly chagrined.
- Brienes: I can see now a tie up between your laboratory work and working with animals and the fact that when you were a boy on the farm you had done the same thing.
- Spieth: Yes, I had always been interested in animals. I had hunted and fished as a boy, and had found it interesting to observe animals, how they behaved in the field. When animals died on the farm, I can remember cutting them open to see what they were like and to see if I could find out what had caused their deaths. A person sees quite a bit of biology on a farm. You see all of the activities of the animals and you learn, for instance, that in a herd of cattle there is always one cow that is bossy (every farmer knows this) and rules the herd. You observe the pecking order of chickens. Even before it was scientifically known, farmers knew certain chickens were at the top of the heap. You'd see dogs fight and calves being born. You took horses to a local stallion for reproduction of other horses, and so on. You saw bulls fighting. You learned a lot about living creatures.
- Brienes: Maybe more than you wanted to know [laughter]. Did you stay a TA all the rest of your college years at Indiana Central?
- Spieth: I was a TA during my sophomore and junior years but, as I said earlier, Morgan took leave of absence during my senior year and went to Indiana University to finish his doctorate, so all courses in Zoology were cancelled for that year.
- Brienes: How else did you support yourself in college the last year?
- Spieth: My parents provided the money, but I went back to the farm in the summertime and between my freshman and sophomore years I worked with a road gang on a new highway which was being built in the area, paralleling the interurban line from Indianapolis to Jeffersonville.
- Brienes: Back where your folks were -- near your home?

Spieth: Yes. Local people were hired to do the construction of the road bed. It was not done with big machinery in those days, but rather it was done with horses and mules and very primitive equipment. A slip shovel was used to gouge the dirt out of the soil and then this slip shovel was slid along to where the dirt was needed. My father had two young mules which he intensely disliked because they were rather unruly and ill-mannered, and he told me that if I wanted to seek a job on the construction crew he would provide these two mules. I worked most of the summer on the road, for which the mules and my services earned five dollars a day.

Brienes: That doesn't sound bad, really.

Spieth: In those days that was not bad, of course. Some of the neighbors also needed some work done and by that time I had trained the mules and they had developed into a superb team.

Brienes: When you gave these mules back to your dad at the end of the summer, they must have been different mules.

Spieth: They were good mules by that time, and he sold them for \$500.00 later on -- and in a sense he gave the money to me [laughter] for my college expenses. During the summer I saved about \$375.00.

Brienes: Well, that was a nice sum.

Spieth: That was approximately half of what it cost me to go to college during my senior year.

Brienes: I want to ask you about the friends you made in college. You didn't make many in high school; was college different?

Spieth: Indiana Central was different and I made a number of friends there, some close friends. My closest friend was a chap by the name of Edward Pence. We remained close all through the ensuing years until his recent death. Another good friend was a man by the name of Eldon Hoos who is now also gone.

Brienes: Was Pence a veterinarian?

Spieth: No, he was a high school biology teacher.

Brienes: I think I communicated with him and he sent me a picture of Hoos and himself. That would have been from those years at Indiana Central?

Spieth: Yes.

Brienes: Were these your roommates?

Spieth: Hoos was my roommate. I cannot even remember the name of my roommate during my freshman year, I regret to say. During the sophomore year, Pence and I would have roomed together except for the fact that Oscar Valentine came in as a freshman that fall and the families had arranged that the two boys should room together. So Pence and Valentine were roommates and Hoos and I roomed together, just across the hall.

Brienes: These were your best friends?

Spieth: They were my closest friends, although I had a number of good friends. Of course, almost all of the students lived on the campus and engaged in extracurricular activities. In these I shared.

Brienes: You got involved in extracurricular activities?

Spieth: Yes, and this is one of the reasons why my grades were not excellent -- because I was doing a lot of other things besides studying.

Brienes: Was this when you got interested in athletics?

Spieth: I had been interested in athletics since I lived on the farm when there would occasionally be summer pickup baseball teams in the community. I would play baseball when I could, but since I was so small I usually was just a substitute or a bat boy, for these pickup teams involved not only people my age but older individuals also.

Brienes: These would be games with little bets on the side, would they?

Spieth: No, not that I know of; there may have been bets going on the side but I certainly did not know about them. Little towns would have teams and maybe a given rural area might manage to have a team when there were enough people around to play. This was essentially the only available sport. The high schools were just beginning to have basketball teams, but there was none at Charlestown or at Henryville at that time. Now they have excellent teams.

Brienes: Were you on the baseball team at Indiana Central?

Spieth: Yes, the campus had a team and I finally made it. I was not a good baseball player but I did get a varsity letter. I also was on the track team and ran the mile and two mile -- not very effectively, but I ran. I've always been thankful that I did

- Spieth: because I think it is probably one of the best exercises that one could engage in, at least in those days. I began running again in later years, especially during my Air Corps days. It is interesting that after I get into condition my heart beat comes down to forty.
- Brienes: Yes. I've heard that from a number of people.
- Spieth: I also threw the javelin, but poorly. I did not make a letter in track. When I was a sophomore I went out for the football team. I was by then as tall as I am now but I weighed 123 pounds. I promptly got knocked unconscious one day. They found me walking around town in a daze later that night, and I didn't know where I was. Apparently I had had a concussion. So the coach decided that since football was not for me, I'd better be the manager. So I became the student manager [laughter] of the team.
- Brienes: What other activities did you get involved in outside the classroom in college?
- Spieth: I was on the student newspaper staff and during my senior year, when I was no longer a teaching assistant, I was the editor of the year book known as The Oracle.
- Brienes: How did you get on the student newspaper?
- Spieth: I suppose because nobody else wanted to do the work.
- Brienes: Was there a faculty member who asked you to come on?
- Spieth: I can't remember that a faculty member did; I think the editor asked me. But the student newspaper was a monthly affair, so it didn't involve the expenditure of much energy or time [laughter]. I do know that I was elected by the student body to be the editor of The Oracle.
- Brienes: We talked of Morgan as a teacher; of course my presumption is that he may have had some influence on your subsequent teaching.
- Spieth: Of course he did. He was an excellent teacher, but as far as my own teaching was concerned, unquestionably the men in my graduate days also had considerable influence on my methods and philosophy.
- Brienes: Since Morgan was the man who sparked your interest in Zoology, could you tell me a little bit more about his teaching techniques? What made him a good teacher?

Spieth: I do not know that he was a good teacher for all his students. His delivery was rather terse. He was not charismatic but his lectures were well organized and the students could understand what he was talking about and follow the line of thinking very well. He was a somewhat cynical man and would sometimes irritate the sensitive student, perhaps. Basically his appeal lay in the kind of enthusiasm that he had for the subject. He was obviously devoted to what he was doing and he insisted that you master the material. It is significant that he sent a whole series of students on to graduate school -- an abnormally large number for a small institution. He was one of the few teachers at Indiana Central who did stimulate students to go into graduate work. He also trained a considerable number of high school Biology teachers. On a one-to-one basis, he was in some ways not only a stimulating man but also he somehow, in a rather quiet way, developed in the listener a decided interest in what he was talking about. He was best with small groups and I doubt that in a large lecture session he would have been as effective as he was in small classes. However, I should point out that for many years he also taught in the University Extension.

Brienes: At the University of Indiana?

Spieth: At Indiana University Extension in Indianapolis -- evening courses. And again he was very successful.

Brienes: How long did he continue teaching? What happened to him in his subsequent career?

Spieth: He continued teaching at Indiana Central until he was in his seventies, and he continued teaching thereafter in University Extension courses. Later, after I had finished my graduate studies, he worked with a commercial nursery in Indianapolis in the development of cultivated plants -- cultivated flowers, particularly freesias, and served as a plant breeder.

Brienes: Was that his interest when he was a graduate student?

Spieth: No, his interest as a graduate student was in Cytology and he completed his doctor's degree during my senior year when he went back to Indiana University and worked on the Cytology of the European earwig which had been introduced into the state of Washington by the military at the end of World War I. The earwig has now spread over a number of the western states [laughter] and it is one of our pests right here in Davis. [Laughter] Our granddaughters try to trap them in our garden to please their grandmother.

Brienes: Does he occupy a significant place in American Zoology?

Spieth: No. His research essentially ended with his doctorate, except that he did genetical research with the commercial organization and was quite successful in breeding freesias. He introduced the first freesias that had an odor -- the perfumed freesias. I once asked him during those years if he was using X-rays to get mutations for his breeding experiments. "No," he said, "there is no need for doing that. There are plenty of natural mutations hidden in all populations. All I do is to inbreed to find the mutants and then select for the mutant that I need. This is a work of art rather than a scientific process, in a sense, because it involves a subtle judgment whether the result will be useful or not useful." He was, indeed, insightful as to what mutants were useful.

Brienes: With whom did he work at the University? Who was his major professor?

Spieth: He worked with Fernandus Payne who was head of the Department of Zoology and also Dean of the Graduate School at Indiana University.



Professor Will P. Morgan and his \$400. microscope

Glacial Lakes and Limnology

Brienes: Now it was Morgan who linked you and Indiana University?

Spieth: Yes.

Brienes: Could you tell me the story of how he got you associated in some way with it?

Spieth: Morgan was interested in inspiring his students to go on to graduate school. There was a chap by the name of Ralph Hile who had graduated two years before I did and who was teaching in high school; he had also been a Zoology major and wished to go on to graduate work. I am sure that during the year Morgan spent at Indiana University, he told Payne and other members of the faculty about the two of us, Hile and myself. I had a letter from Morgan saying, "If you will write to Dr. Payne, you probably can receive a teaching assistantship and be admitted to graduate school at Indiana University."

He did one other thing. Dr. Will Scott of the Department of Zoology was a limnologist and in charge of a summer station that the University had at Winona Lake. Scott taught Limnology there and another faculty member taught Embryology during the summers. There were a number of students, particularly pre-medical students, who needed to take Embryology and were not able to take it, for one reason or another, in the normal school year; so they would come to Winona Lake and take the summer course.

In addition, a few faculty members from various institutions would go to Winona to do research in that part of the country; stations of this sort are fairly common in the Mid-West. The most famous one is the University of Michigan's summer station at Burt Lake. The University of Minnesota has one at Lake Itasca. Indiana has one at Winona Lake. Scott, as I said, was the Limnologist -- and Morgan suggested that I should go to Winona that summer and take the course in Limnology.

Brienes: Was this a summer between your junior and senior year?

Spieth: Yes. Furthermore, Morgan was able to get Scott to hire me as a caretaker. Each summer session, two students (graduate students or potential graduate students) lived in a small room in one of the buildings and served as the janitors and supply agents, etc., for the station.

Brienes: Could you describe the physical facilities at the lake?

Spieth: They were very simple. The station was on the edge of the lake and there were a few boats, row boats, and then there were two frame buildings very similar to the barracks built by the army previous to World War II. Each building had two stories which served as classrooms, laboratories, storerooms, and so on.

Brienes: So you were taking the course?

Spieth: I was taking the course in Limmology, and also serving as janitor.

Brienes: How many hours a day did you work?

Spieth: We started out early in the morning and we went to bed at nine or ten o'clock at night.

Brienes: Was it pretty much full-time work?

Spieth: It certainly was. At the beginning of the session, I also had a job as a waiter at one of the local hotels. I soon found that I could not do all three things, so I dropped the job of waiter and concentrated on the course in Limmology and doing my duties at the laboratory.

Brienes: Did you have to pay tuition there for this course?

Spieth: I think the tuition was \$37.50, but that may be wrong.

Brienes: How about your wages as a janitor?

Spieth: I received no wages for that. I simply received living facilities [laughter].

Brienes: Oh, I see. How did you travel there?

Spieth: I can't remember how I got there. I suppose it was by bus. There were buses even in those days.

Brienes: Now you were at Winona; the courses were being given, and there was some sort of experimentation being done in the lake.

Spieth: Yes.

Brienes: Did you have any part in any of the investigations in the lake that summer?

Spieth: No. There were investigations which the students did in connection with their class work, but actually these were not original investigations; they simply were experiments done outdoors in the lake. We would collect specimens and identify them; we would take water samples at various levels in the lake; we would take dredge samples from the bottom of the lake, and we would do the chemistry of the water and the identification of the animals that we found in the samples. The samples from the bottom were taken with a gadget called an Eckman dredge, and the samples in the water were taken with a plankton net, a fine cloth net which collected the very small organisms. We also would go along shore and collect specimens.

The course lasted only half of the summer and in the last half Hile (who was also a student at the station) and I spent our time observing fish nests in shallow water. Sun fish were nesting and reproducing. No one had done this sort of study for this particular species that I know of; it was never published, but we had a very interesting and also informative time.

Brienes: This you had done on your own?

Spieth: This we did on our own.

Brienes: Who came up with that idea?

Spieth: I don't remember whether it was Hile or myself. We ended up doing it together. We would get up early in the morning before daybreak and go out to watch the fish and note the interactions between individuals in different nests. I can remember the thing that we found that Scott did not know was that the greatest predators on the sun fish eggs in the nests were the snails that crawled in and ate the eggs. The sun fish tried to keep the snails out but invariably there were more snails than the sun fish were able to keep from invading the nests, so most of the eggs were eaten by the snails.

Brienes: Can you tell me your assessment of Will Scott on your career? -- or describe him as a teacher or as a researcher?

Spieth: Will Scott was one of the fathers of limnology in the central part of the United States. He was a gentle, thoughtful, big man. He was not a great lecturer; his voice was soft. He was one of the really great human beings that I have known. Actually, of course, I did some of my graduate work under Scott.

Brienes: Oh you did? -- you worked with Scott?

Spieth: I started my graduate work under Scott.

Brienes: As a result of having met him that first summer, do you think?

Spieth: Well, not only having met him in that first summer, but because in the following summer I worked under his direction serving as what would now be called a research assistant. Scott had a summer home at Winona Lake and he was director of the station. His mother was still living with the family at that time. He had a charming wife and a daughter, and they all came up to Winona Lake for the summer. In many ways they treated me as one of their family. They were really kind to me. I deeply appreciated and enjoyed his mother who was an elderly woman by that time. She was a sweet and gentle person.

Scott turned out a number of graduate students and Hile was one of the most brilliant. Dr. Scott was the stabilizer of the Department of Zoology. When serious arguments arose, he always was a peace maker.

Brienes: I see. What year was that when you were at Winona?

Spieth: That was the summer of 1925.

Brienes: Let's leave your own education just for a minute and pick up your family. What was the situation back at the family farm at this time?

Spieth: In 1925 the conditions at the farm were fairly good, although as I look back on it, conditions were obviously beginning to deteriorate to a certain extent due to the fact that farm prices were falling relative to other prices, and very real inflation was taking over. We never called it inflation but the prices of agricultural commodities were going down and the prices of the things that farmers purchased and needed were going up. But basically, I would say that probably as far as my mother and father and Uncle Dave were concerned it was one of the pleasantest periods that they had on the farm.

Brienes: Were you getting any of your support from your family at that time?

Spieth: Yes, the family supported me throughout my undergraduate days. I once figured out that it cost approximately \$2,500 for the four years. As I have said, I did work near home in the summer although after the end of my junior year I was never again at home except for short vacations. I was at Winona the summer of

Spieth: 1925 and during the summer of 1926 I was at Lake Wawasee. Scott had received some monies from the State Department of Conservation to make an intensive study of the largest lake in northern Indiana -- Lake Wawasee. Hile and I were selected to make the study. So we spent the summer of 1926 at Lake Wawasee doing limnological investigations.

Brienes: Why was it at Wawasee and not at Winona? Was there a reason?

Spieth: Winona was well known biologically because Scott had worked on the data that came in from the various classes over the years and he had an insight into that lake. But Wawasee was the largest lake in the state, and it had not been investigated. The State Department of Conservation was interested in finding out about conditions in the various lakes in the state. These were all lakes that had been formed upon the retreat of the glacier. They had all been gouged out by the movement of the ice and some of them had also been added to or detracted from by subsequent erosion. There were large numbers of these lakes in northern Indiana and it was of interest to find out what limnological conditions existed in them.

Brienes: When you and Hile were at the lake doing the work, was Scott there also or was he at Winona?

Spieth: He was at Winona. Occasionally we would go down and report to him or to pick up chemicals and other supplies. The state had a fish hatchery at Wawasee; the garage at the hatchery had an upper story which was really an attic which one got to by climbing up a ladder. This was turned over to us as a place for both working and sleeping. There was a little store nearby on private land. The superintendent of the fish hatchery was a man by the name of Fleming, who was willing to give us what we called dinner in the middle of the day and supper which came in the evening. We would buy rolls or some small things at a little local store for our breakfast.

Brienes: I see. Could you describe in detail exactly what you did at the lake that summer, and how you went about doing it?

Spieth: Well, first of all we had to get there. So Hile and I purchased a second-hand Ford pickup. I think it was a 1921 model. It had a little truck bed on the back and we piled all of our stuff on that and went to Wawasee. Scott had given us a small amount of money for purchasing a few other things that we needed. We had a small outboard motor and we had equipment that Scott had shipped up from the University, including the Eckman dredge.

Spieth: Our main interest that summer was dredging samples on a series of transects across the lake. We brought these dredging samples back in after they had been washed carefully through fine sieves to get rid of the dirt. Then we spent the rest of the day identifying and counting the organisms. We were making a quantitative study on the number and the kinds of organisms to be found at the bottom of the lake. By making the series of transects across the lake, we were able to draw a fairly accurate picture of the distribution of the various organisms in the various parts of the lake, and we found that they did vary from place to place.

Brienes: Was there any reason why the state would want to invest its money in that study? -- some practical reason? Anything to do with the fish hatchery? -- or why would they spend the money?

Spieth: I never heard any of the background discussions that went on as to why the state was specifically interested in the matter. It probably had to do with the fish productivity. At that time Wawassee was a major vacation area, particularly for the people of South Bend, which was relatively close to Wawasee. Many of them had summer homes there.

In those days, of course, transportation was much more primitive than it is today. There were no private airplanes and even the automobiles and the roads were such that you couldn't go on long, extended trips. So the normal summer vacation for many families was to have a house on a lake where the family would live while the father remained in town, usually coming to the lake on Saturday morning or Friday night to stay until Sunday night. The Studebaker automobile factory was in South Bend, and Studebaker cars were considered very elegant and excellent. Many of the people, either out of loyalty to Studebaker because it was in South Bend or because they were Studebaker employees, came to the lake each weekend in Studebakers and you would see just literally hundreds of those cars around the lake.

Brienes: What did you do for your own recreation there? Sounds like it was pretty lonely.

Spieth: Those were days of prohibition, of course, but there was a local bootlegger in the area, somehow related to the owner of the store. I can remember that once or twice we managed to get a small amount of something to drink [laughter].

Brienes: You won't say what --? [laughter].

Spieth: Well, it was quite obviously moonshine. Actually, however, we worked constantly. This, of course, is one of the things about biology: if you are engaged in it and love it, you're having a vacation all of the time.

Brienes: That's how you felt that summer?

Spieth: We certainly did. We were constantly busy. Some nights the mosquitoes could be bad and some nights they would invade our attic dormitory in spite of the fact that we had mosquito netting around. There were no windows but there was a big double sliding door at one end of the attic, and we put mosquito netting over that.

I recall one night that Hile had some sleeping pills with him which were emergency items that we carried. I never used them, but he decided that night that since he couldn't sleep because of the mosquitoes he would take a couple of the pills, which he did. In spite of that, he couldn't go to sleep at all. The mosquitoes kept him awake most of the night and we got up at our usual time of six in the morning and were out on the lake at seven. It required two people to do the dredging, because one man had to handle the boat while the other handled the dredge. That morning after we got on the lake, Hile immediately went to sleep in the boat, apparently due to a delayed effect of the sleeping pills [laughter]. There wasn't anything to do except get him somehow back to land and put him to bed, where he slept most of the day. We lost the day and that was really a tragedy because it threw our schedule off.

Brienes: Now you came back to that lake for a number of years after that, didn't you?

Spieth: Yes, I returned to do lake work for a number of years. The following year we did chemistry studies on various lakes but we were headquartered at Wawasee. I managed to pick up an Ohio River skiff, a very stable but light boat. We attached it to a little two wheeler trailer and went around to various lakes to take water samples.

Brienes: Oh, not just at Wawasee?

Spieth: We collected samples at other lakes, then brought them back to do the analyses at Wawasee where we had a lab.

Brienes: Was this Chemical analysis of lake water?

- Spieth: Yes, it was primitive chemical analysis and mainly we were interested in the distribution of the oxygen of the lake. This had something to do with productivity. For reasons that would take a long time to explain, many lakes during the summer time receive no fresh oxygen in the deeper regions, and consequently part of the lake may be completely devoid of oxygen for much of the summer. Obviously fish cannot live in that particular area of water and must become distributed to the upper layers. It varies from lake to lake according to the shape of the lake, wind conditions, depth of the waters, and so on.
- Brienes: I see. Were you paid by the day for this work during the summer?
- Spieth: We received a small stipend but I cannot remember just what it was. We didn't become wealthy, but at least we had support for the summer.
- Brienes: But you did it the summer before you went to graduate school?
- Spieth: Yes, and for the next three summers after I had finished at Indiana Central and had entered graduate school.
- Brienes: When you began your second summer of lake work, you had just completed your bachelor's degree. Isn't that right?
- Spieth: Yes, and I suppose we graduating seniors were as nostalgic and as excited as are most seniors anywhere.

My parents and two brothers came for Commencement in May, 1926. Mother and Father were beaming. I remember that David, who was by then a sophisticated sophomore at Antioch College, sat on a top row snickering over the "mundane, bourgeois ritual". Emmett was in high school and he looked impressed. I must admit that I was happy, too, but already thinking about the lake work.

None of us could know then that many years later (1958) my Alma Mater would, at another Commencement, confer on me the honorary LL.D. degree. I would not only have been amazed but also flabbergasted. Further, I would have had to ask what in the world a LL.D. degree might be.

Graduate Student at Indiana University

Brienes: When did you begin graduate studies at Indiana University?

Spieth: I went there in the fall of 1926. The campus was then, and it still is, one of the most beautiful campuses in America. It is in hilly, rolling country, and someone has always had the good judgment to keep large forested areas within the campus. There weren't too many buildings there then, because the student body was not large. There were only about 3500 students at that time. Today there are nearer 35,000.

The Department of Zoology was housed in Biology Hall. On the first floor was the Department of Botany; the English Department offices and some classrooms were on the second floor. The third floor, part of the second floor, and the basement housed Zoology.

The Zoology faculty consisted of four men: Fernandus Payne who was head of the Department and also Dean of the Graduate School; George Scott, who was the oldest member of the Department; Alfred Kinsey, a young man who had been there since 1920; and G.W.D. Hamlett from the University of Texas at which he had just completed his graduate studies. He was only a bit older than most of the graduate students, was married and had two children.

In addition there was Andy Christy, a wise and kind little man who was the janitor of the building and also the handman and graduate student confidant for the Department of Zoology.

Brienes: So you had five people running the Department?

Spieth: Well, there were four faculty members and one janitor -- student advisor. (Laughter) There was no stockroom, of course, and there were no research assistants or postdoctoral fellows.

Brienes: How did the facilities compare with others for that day? -- with other universities?

Spieth: I suppose for that day the facilities were equal to those in a number of other institutions, although I am sure they were not as good as those at the University of Michigan which had a museum and was larger.

Spieth: Indiana University at that time was one of the smaller state universities, since it was separated from the Land Grant College which was located at Lafayette, Indiana (Purdue University). Illinois had a single university with agriculture, engineering and all the rest on one campus. The same thing pertained in Wisconsin and Minnesota.

Indiana University did have a Law School and a School of Medicine, but it was a small institution and I would say that it was not at that time regarded over all as one of the stronger units within the Big Ten.

Brienes: How did the Department of Zoology rank, do you think, nationwide? Is there any way of judging that?

Spieth: The Department of Zoology was somewhat unique. David Starr Jordan had founded the Department and then later became President of I.U. Leland Stanford then induced Jordan to leave Indiana and become the President and "builder" of Stanford University. Carl Eigenmann, Jordan's most outstanding student in ichthyology, became head of the Department of Zoology and ably carried on in Jordan's footsteps. Thus there was a tradition of excellent scholarship and teaching in the Department.

Brienes: Did it have a certain orientation so far as what it specialized in, or what it did in research?

Spieth: The Department could best be described as a general zoology department. Payne, who had been a student of E.B. Wilson's at Columbia University, pursued research in cytology and genetics; Kinsey had studied at Harvard under W.M. Wheeler; Hamlett, an embryologist, had been a student of J.T. Patterson's at the University of Texas, and Scott had studied under Eigenmann at Indiana University. The mentors of each of these four were distinguished scientists, members of the National Academy of Sciences, and their influence was evident in the men who constituted the faculty of the Department.

Brienes: Now Morgan aimed you towards Indiana University. Had you ever given any thought to any other graduate school?

Spieth: None.

Brienes: How did you support yourself throughout graduate school?

Spieth: Mainly I supported myself through teaching assistantships.

Brienes: Were you a teaching assistant all the way through?

Spieth: I was, except for the last year when I was the Waterman Fellow. The Department of Zoology had a single fellowship which was available for a senior graduate student. It paid only slightly more than did a teaching assistantship, but the recipient was relieved of all teaching duties. During my final year as a graduate student, I was awarded this fellowship which had an interesting history.

Dr. Luther D. Waterman, Professor Emeritus at the University's Medical School, was an affluent individual who lived in Indianapolis and who was interested in supporting scientific research. He also liked to play pinochle. So did Dr. Eigenmann, head of the Department of Zoology and Dean of the Graduate School during the early part of the century. Often on Friday evenings Eigenmann went by train to Indianapolis to play pinochle with Waterman. Eventually he induced Waterman to fund the scholarship. In addition, Waterman established an endowed professorship for the campus. The graduate fellowship, however, was restricted to the Department of Zoology.

In addition, as earlier noted, I did receive summer stipends for the lake work. For the summer of 1930, however, I was given money from the University of Michigan as a result of my acquaintance with a man by the name of E.B. Williamson, a banker in the town of Bluffton. He spent all of his spare time in life doing two things that he really enjoyed. One was developing new varieties of iris and the other was collecting Odonata, commonly known as dragonflies and damsel flies. Although not officially connected to the universities of Indiana and Michigan, he was associated with them in an informal manner.

Brienes: I'm sorry; what do you mean he was "associated" with them?

Spieth: He knew intimately men on the faculties and they supported his research efforts, certainly giving him moral support. In the summer of 1930, the University of Michigan gave Williamson some money for collecting. I had met him the previous year. After finishing my limnological work at the lake, Williamson, two other students and I drove in my Ford to the Ozarks to collect. On the basis of that experience, he decided that I was capable of accomplishing the collecting that he wanted done in the southeastern states.

By that time my research was such that it was important for me to get to the southeastern United States. By then I had decided not to work in limnology and had chosen to work on the Mayflies (Ephemeroptera). There had been very few Mayfly collections made in the Southeast and I needed material from there.

Spieth: When I had been working on limnology in the preceding summers, I had been able to collect Mayflies in the evenings and on weekends in northern Indiana, but I had had a limited area for collecting and wished to extend it; that's why I had gone to the Ozarks, taking Williamson too.

Brienes: Well The 1930 summer collecting trip also involved a chap by the name of Francis Byers who was an instructor at the University of Florida at Gainesville. I drove my 1926 Model T Ford to Gainesville and then Byers and I camped and collected in northern Florida and Georgia. Unfortunately Byers developed dysentery and had to be returned to Gainesville. I spent the remainder of the summer prowling the waterways of western Florida, Georgia, and the Great Smoky Mountains of North Carolina. Often I saw no other human beings for days. Usually I was miserable from chigger infestations. My food was scant. But I did get interesting collections of Mayflies and of Odonata.

Brienes: Do I remember you saying you intended to work with Scott when you got to Indiana University -- in limnology? What happened to change your mind?

Spieth: We were told to take certain courses and one of those I was advised to take was Kinsey's Entomology course as well as his course in what amounted to Systematics and Evolution. After several summers' work in limnology, I finally decided that the field did not interest me as much as working in the area of evolution. A lake is sort of an organism to itself. While it has an evolutionary history, in that all lakes eventually are filled up and disappear, it is a different kind of evolutionary history from that of organisms.

Brienes: So studying with Professor Kinsey changed your mind from limnology into some aspect of evolutionary study.

Spieth: I went to Dr. Scott and asked if he would be willing for me to change my research objectives. He kindly gave such permission. I then went to Kinsey and asked if he would accept me as a graduate student. Of course, those men all knew each other intimately, and he naturally wanted to talk with Scott, which he did. As a result, I started to study under Kinsey's direction, but I continued to work in the summers for Scott.

As a by-product of my limnology work, I chose the Mayfly as the organism on which to work. I had become acquainted with the Ephemeroptera at the lakes where they were numerous and I found them to be most interesting. Kinsey did not think they were appropriate or easy organisms to do research on, but in

Spieth: those days the faculty member did not tell the student what to do in his research. The student was responsible for choosing his own problem. The faculty member might advise against it, which Kinsey did, but when I said I wanted to do it he gave his approval.

Brienes: Well, you now had a professor who later became very well known to the general public. I'd like to hear more about Alfred Kinsey. Could you tell me a little bit about his background?

Spieth: That's an interesting story. Of course, it's been told in some biographies of Kinsey. He was a son of a fairly affluent family. His father was an engineer and a graduate of Stevens Institute of Technology. He insisted that his oldest son, Alfred, should be an engineer and that Alfred should go to Stevens Institute for his freshman year, which he did. At the end of the year, however, Alfred went to his father and said that he was not going to be an engineer, that he had no desire to be one. His father replied, "Very well, if you're not, I not only will not support you but I will disinherit you". And he promptly did so. Kinsey, after having lived a comfortable life up to that point, went off on his own. He went to Bowdoin College in Maine and majored in Psychology, even though he intended to do his graduate work in Zoology.

Brienes: I don't understand that. Why would he go to Psychology?

Spieth: He estimated that if he learned psychology which deals with animals and their behavior, then he could go into zoology later with an advantage in understanding organisms. He graduated in due time from Bowdoin and was accepted as a graduate student at Harvard. He supported himself during all those years in a variety of ways, including teaching at summer camps in the mountains of the eastern United States, particularly in New Hampshire. He also lived very, very frugally.

At Harvard he worked under the renowned William Morton Wheeler, the ant specialist. He was also interested in plants and particularly in the work of a man by the name of Fernald. He used to say that he learned his general biology and zoology from Wheeler and his knowledge of systematics from Fernald. After completing his Ph.D. at Harvard, Kinsey received a Sheldon Traveling Fellowship and spent the next year in the field. His research program dealt with the systematics and evolution of the Cynipidae, a group of wasps that lay their eggs on oak trees and cause galls to form. The young wasps develop inside the galls. He came to California on the fellow-

Spieth: ship and collected specimens of oaks and the galls in various parts of the state as well as in other sections of the western United States. It is interesting that some of his oak collections made in California were later given to the University of California at Davis. His collections of gall wasps eventually went to the American Museum of Natural History in New York.

Brienes: Why did he go to Indiana University?

Spieth: I suspect that Eigenmann had talked to or written to W.M. Wheeler, Kinsey's mentor at Harvard, telling him that Indiana was seeking an additional faculty member in Zoology. Both men were members of the National Academy of Sciences and both were articulate, energetic scientists.

Payne, however, was the person mainly responsible for evaluating Kinsey when he came for an interview. He also took Kinsey to a Sigma Xi lecture on campus and introduced him to a number of the members, including Clara McMillen, a graduate student in the Department of Chemistry. Whether Kinsey accepted the position in the Department of Zoology because of Miss McMillen, I do not know -- but the records show that he joined the faculty in the fall of 1920 and Clara McMillan became Mrs. Kinsey the following June.

Except as a student in his class, I had little contact with Kinsey the first year, but became better acquainted with him during the second year. He was then following the routine he followed as long as I was there. He would arrive at the office in the morning and always had a class from eight to nine. Normally he taught only one class each semester, although when he taught entomology he had a laboratory once a week in addition to the eight o'clock lecture. From nine to twelve he worked on his research program.

Brienes: Was his research still on the wasps?

Spieth: Yes. All the time I was at Indiana he was studying the Cynipidae. At twelve o'clock he would eat his bag lunch and spend the hour reading some of the current literature. If he had a laboratory class to teach, as he did during one semester each year, he would then be in the lab from one to three or four o'clock. Otherwise he would work until four on research or whatever official business that was necessary, but it was usually research. Then he went home to work in his garden until six or seven o'clock. He had quite a large garden. He grew iris and always had the latest varieties that had been developed. As time went on, his iris garden became quite spec-

Spieth: tacular and attracted many visitors. Often the bulbs were rather expensive. He would allow them to multiply and as soon as the flower beds became full he would sell bulbs. Thus he actually made a profit out of his garden.

The Kinseys would have dinner usually at six or seven, and then from eight to ten he would be with his family, usually playing music. He was an excellent pianist and the family had what was exceptional in those days: a large record collection and a good phonograph. He was usually in bed by eleven o'clock and up at six the next morning.

Brienes: Now how did you become so familiar with his schedule?

Spieth: Well, we saw him in action, of course; we saw him engaged in his schedule at the University. Later when I was a graduate student of his, he often had some of us over to his home for an evening to listen to music and talk. I recall that Mrs. Kinsey almost always served a delicious persimmon ice, made from the fruit of the tree growing at their front doorstep.

Brienes: It sounds like he was an unusually disciplined man. Was he?

Spieth: Highly disciplined. And with a great deal of energy and drive.

Brienes: You learned to know him well, I suppose?

Spieth: Yes.

Brienes: What influence did he have on you professionally? -- in directing you or in guiding you in any way?

Spieth: A major professor has multiple influences on a student. I suppose his work habits, his attitude toward biology and his questing mind all influenced me. How I would have differed had I worked under another man, I cannot really analyze.

Brienes: He didn't think going to Mayflies was a good idea for you, you said.

Spieth: That's right.

Brienes: But once you did go, did you get much close guidance from him in your work or were you completely alone?

Spieth: Completely on my own for a long time. He would occasionally ask me what I was doing, where and how much material I had collected and studied. Actually he practically had no contact with me as a graduate student -- and this was not atypical for those days --

Spieth: until I had produced a tentative draft of my thesis. That is not to say that we did not talk about principles and techniques of systematics but this usually went on in seminars.

Spieth: He did not conduct individual seminars, but we had a departmental seminar once a week which all graduate students and all faculty members attended. It wasn't required of the students; no formal record was kept, but there was just no doubt that we would attend the seminar once a week. At these seminars reports were made and then there followed general discussion. Because it was a small faculty and only a few graduate students, there was much communication -- and in courses one talked to faculty members and ideas came out.

During those years I plugged away at collecting Ephemeroptera and studying them, and I finally produced a rough draft for a thesis. Once that was done, then Kinsey worked very closely with me until the thesis was finished. We actually saw each other at regular intervals and he was both meticulous and helpful.

Brienes: Did he have other graduate students at the time?

Spieth: Yes, he had other graduate students at the same time, but by then I was his senior graduate student.

Brienes: Did you keep in contact with him after you left?

Spieth: Oh yes. I also had had other contacts with him while at I.U. Several times I went with him on field trips to collect Cynipidae. In the fall of 1928 I had gone with him to the Southeast. It was from seeing the streams in this area that I decided to return in the summer of 1930 to collect Mayflies. In 1929 I went with him on a field trip to Illinois to collect galls.

Cynipids are interesting in that you can collect the galls, bring them back into the laboratory, put them in containers, and eventually the adult insects hatch out of the galls. Thus Kinsey didn't have to collect the adult insects directly in the field. Furthermore, the galls would contain not only the insects themselves but any parasites that might be on the wasps. So one can get a lot of information without a great expenditure of time and energy. Undoubtedly one could acquire data on gall wasps much more easily than on Mayflies.

Brienes: Did he have a special interest in some aspect of the behavior of these wasps?

Spieth: No, primarily he was studying their systematics and evolution.

Brienes: How did Kinsey end up switching over to studying human sexual behavior?

Spieth: That is an interesting story. He taught a General Biology course for students who were not majoring in zoology but who wanted a course which would satisfy graduation requirements for science credits.

He was also interested in teaching this course because one of the things he had done was to write the first modern high school level textbook of that period. I asked him once why he didn't write a college textbook and he said there were two reasons. "First of all," he said, "I think that a good modern textbook for high school is the proper place to introduce the new ideas in biology. But," he said, "the second thing is that frankly there is much more money in a high school text than in a college text." You see, his father had been quite well to do and, although Kinsey had been on his own for many years after becoming disinherited, he had some of his father's traits. [Laughter].

He had made money out of his garden and he made money out of his textbook when he was still a relatively young man. When I first knew him, it was just not quite a decade after he had completed his doctorate. By that time he was in fairly good circumstances for a young college professor.

He did not, however, receive any personal gain from his books on human sexuality. Every cent of profit from those was plowed back into further researches.

Coming back to Kinsey's work on sexual behavior, he discussed sexuality in the General Biology lectures, and he found that the students were increasingly asking him questions. They would come up after class with questions and personal problems. He suddenly realized that there was a fantastic variation in human sexuality, judging by the questions these undergraduate students posed, and he became intrigued. This is not surprising because much of his studies of the Cynipidae revolved about questions which dealt with variability in organisms.

He did not actually start his work on human sexuality in any serious manner until after I had left I.U. In the year that I completed my own doctorate (I took the final examination in September of 1931), Kinsey was going to Mexico for an extended collecting trip, searching for cynipids, and was to be gone all

Spieth: of that semester. The faculty therefore asked me to serve as a replacement for Kinsey while he was away from the campus.

It was after this Mexican trip that Kinsey began to become deeply interested in studying human sexuality and started to accumulate data. By that time I had gone to The College of the City of New York.

We were not exceedingly close after I left Indiana and went to New York, but we did keep in contact and had occasional visits. Actually, I was interviewed among his first five hundred interviewees. Later I was re-interviewed twice -- a procedure followed with quite a number of the early interviewees.

Brienes: You were one of the anonymous interviewees! [Laughter].

Spieth: I was one of them.

Brienes: From what I can tell from your publications, and I'm hardly an expert, it seems that you started concentrating on sexual behavior of the Mayflies. I'm wondering what is the connection between Kinsey's studying human sexuality and your study of the Mayflies.

Spieth: There's no connection at all. I published a single paper on the mating behavior of the Mayflies. The Mayfly, of course, lives only twenty-four hours. Some of them live less than that; a few live forty-eight hours. Some of them emerge as subadults in the late afternoon or early evening just about twilight; the adults court and mate, and then die within three hours. By nine or ten o'clock at night the whole adult population is dead.

Larval populations live in water and they typically take a year to mature and emerge as adults. The adults cannot feed; they have no mouth parts, and the intestinal system is filled with air which serves as a stiffening agent and support for the body. Mating takes place in the air. The males engage in a spectacular aerial dance, and the females finally come into the dance area, are caught by the males and mated. Different species select different places for the dance and different times of day. This is of great importance in understanding the biology of the Mayflies, and I picked up a fair amount of information and published a paper on it.

But primarily my work on the Mayflies was devoted to the phylogeny and evolution of the group. Most of my Mayfly papers, and you know I have a considerable number, are of this nature.



Alfred C. Kinsey  
outside Biology Hall at  
Indiana University, 1930

Spieth: Really I was studying the evolution of the Mayflies, and incidentally their mating behavior, but that work had nothing to do with my subsequent studies on the mating behavior of Drosophila, the stimulus for which came from a totally different source than Kinsey.

Brienes: Before we go on to New York, I would like for you to sum up your graduate student experiences.

Spieth: The academic year 1928-29 was the low point in my graduate student career. I was depressed and worried both scholastically and personally. In the fall of 1928 my beloved Uncle Dave died. He developed a strangulated hernia one night and this resulted in peritonitis which was fatal. Father was left in a serious quandary because the operation of the farm needed the efforts of two male adults. Financially, farming was in serious trouble and the operation was losing money. Dad simply could not afford to hire help at that time. I was saddened to see the stress that he, Mother, and my youngest brother Emmett had to endure.

When I went to Indiana in the fall of 1926 I was engaged to a coed at Indiana Central, a charming girl who was an Education major. We saw each other infrequently, since neither of us had the time or money necessary to travel back and forth between Indianapolis and Bloomington. We gradually drifted apart and in the fall of 1928 I finally terminated our engagement. I had really had no formal dates with anyone at Bloomington and the breakup, although I deemed it best for both of us, left me dispirited and lonesome.

I also realized that academically I was insecure. Hile and I had started at the same time, i.e., in the fall of 1926. In the early part of 1929 the faculty told him that he would take his qualifying oral examination during the spring semester. This was the major hurdle for a graduate student; if he passed this examination he would typically receive his Ph.D. as soon as he had finished and defended his thesis. None of the faculty talked to me about taking such an examination at that early date. Further, Kinsey had selected a younger (less experienced time-wise) graduate student as the teaching assistant in his Entomology course. From casual statements now and then I came to the conclusion that he doubted that I could successfully pursue a Ph.D. program. I felt sure the faculty debated the matter and I was resigned to the possibility that I might be called in and told that I should prepare to take a Master's examination in the spring, which was the standard method of dismissal from graduate status. This did not occur and I believe it must have been Dr. Scott who saved me from such a fate.

Spieth: One pleasant thing did occur during the spring of 1929. I was taking a class in Geology and found that Miss Evelyn Wilkinson, Dean Payne's competent and attractive secretary, was also taking the course, as a part-time student. I saw her frequently in class and after a time suddenly realized that she was no longer wearing an engagement ring. We began to see each other both in class and out of class. I found her to be an extraordinarily wonderful person and I have not changed my opinion during the ensuing forty-nine years.

Hile passed his orals and the faculty told him to take some courses during summer session. As a result in the summer of 1929 Raymond (Mike) Myers replaced Hile as my companion in the lake study which continued that summer at Lake James.

That summer it became apparent that not only were my parents having financial and operational problems on the farm, but also that Dad was seriously ill. He had difficulty swallowing food, and the condition became increasingly serious. Today there are remedies for the pathology that he developed. Then there was none and during the following year he gradually starved. I returned home for Thanksgiving vacation in 1930 and found him extremely emaciated and weak. We talked for several hours one night and the next morning he slipped away. I have always been grateful that Dr. Hamlett came to the funeral and brought Evelyn with him.

Mother was physically and mentally exhausted and financially decimated by the ordeal of my father's long illness but she and Emmett, then eighteen years old, insisted on carrying on the work at the farm.

During the academic year of 1929-30 the faculty and especially Dr. Kinsey apparently changed their opinion about my intellectual ability. I was then writing my thesis and Kinsey found it interesting, even saying he was pleased with the new insights into the evolution and phylogeny of the Ephemeroptera that I had elucidated. In the fall I passed my qualifying oral examination and was awarded the coveted Waterman Fellowship for the ensuing academic year.

In the spring of 1931 Dr. Sydney Kornhauser called Dr. Scott to ask if the Department had a senior graduate student who might be interested in participating in teaching a field course at the Cold Spring Harbor Biological Laboratory on Long Island during the coming summer. I was fortunate to be recommended to and accepted by Kornhauser.

Spieth: In June I drove my Model T Ford to Cold Spring Harbor where a new world was opened up to me. In August I returned to Indiana, still driving the often recalcitrant Model T. (In it, one backed up a hill.) My mother was usually quite sanguine about my travels, but this time she was unwontedly concerned and quite relieved when I reached Bloomington, Indiana, on August 28 in time to get married.

That fall I started my first faculty appointment as an Instructor in Zoology and I took my final oral examination, which consisted of defending my thesis. The examining committee was satisfied, even complimentary, and my graduate days were ended. I had majored in Zoology with minors in Geology and Botany.

The life of a graduate student during my years at I.U. had a monastic tinge. Two of the senior students were married when I entered graduate status. Because of the financial difficulties they faced, the faculty decided that in the future only single students would be admitted. Even those of us who were unmarried had difficulty existing on the small stipends (\$500.00 to \$720.00) we received as teaching assistants for a year's work. Our needs were, however, minimal since our lives totally revolved about the laboratory.

There was a large room where each of us was assigned space for our books, collections, and research needs. It was known as the Bull Pen. We usually arrived at Biology Hall no later than eight in the morning, often earlier, and departed the building from ten to twelve o'clock at night, if not later. Saturday afternoon and evening was our period for relaxation plus taking care of personal matters such as laundry or minor purchases. Sunday was usually just another day in the laboratory, except that there were no undergraduate students around then and one could concentrate on work. We usually spent seventy hours, or more, per week in the laboratory -- or in the field. To follow such a routine for four or five years made a lasting impression upon all of us.

Infrequently a student would find the pace unacceptable and would quit, but most of us accepted it as the normal requirement for graduate study and had no feeling of being abused. Indeed, it was a period of high mental stimulation which we relished. Further, we assumed that when we had completed our graduate studies and were officially admitted to the academic world the pace would not be much different. We noted that the competent and successful faculty members were following a work schedule not too different from our own.

Brienes: You completed your doctorate in 1931 when the Depression was starting to hit bottom and teaching jobs were scarce. How did you get your first teaching job outside of the temporary instructorship at Indiana University?

Spieth: I had planned, of course, to stay at I.U. for the academic year of 1931-32. Dr. Morgan of Indiana Central College wanted to attend the meetings of the American Association for the Advancement of Science to be held in New Orleans during the 1931 Christmas vacation. He invited me, along with another graduate student, to ride to New Orleans with him. I went and for the first time I attended the meetings of the Association. I also met Dr. A.L. Melander, head of the Department of Biology at The College of the City of New York.

During the previous summer, Dr. Payne had spent some time doing research at the Woods Hole Marine Laboratory in Massachusetts and there he had met a professor named Johnson who had told Payne that there would be an opening at CCNY in the middle of the year, and Payne had mentioned that I was just completing my doctorate and might be available. At any rate, when I met Melander in New Orleans, he offered me the position and wanted me to be in New York in another month.

I returned to Indiana and asked the faculty if I could be relieved of my appointment at the end of the semester. They said: "Surely, surely, go ahead [laughter] -- if you have a job -- for they are all but non-existent these days."

I took off for New York on February 3, 1932.

Brienes: Before you go to New York, maybe this would be a good time to pick up on your marriage. How did you meet your wife?

Spieth: Well -- that's a bad term. I don't like it.

Brienes: Why do you object to me saying "How did you meet your wife?"

Spieth: I don't object to you saying how did I meet my wife. I object to starting my reply out with "Well". [laughter].

To answer your question, when I went to Indiana University in the fall of 1926, Evelyn Wilkinson was the secretary for the Graduate School. Since Fernandus Payne was both Dean of the Graduate School and Chairman of the Department of Zoology, he had a combined office in Biology Hall on the third floor next to the graduate student laboratory.

Spieth: Evelyn's father had died a few years before and her mother moved to Bloomington so her children could attend the University. Her son Lloyd was already a student there, Evelyn was ready to enter as a freshman, and her sister would soon be completing high school. There was also a baby brother. The family found itself in financial straits and Evelyn had been working in offices on the campus. By 1926 she had become secretary for the Graduate School. So I knew her from the day I registered as a graduate student.

We became better acquainted when it happened that we both enrolled in the same course in the Department of Geology. We began to see each other quite often and eventually decided to marry when I was clearly in the terminal stage of getting my doctorate. We were married on August 30, 1931, had a short honeymoon in the Cumberland Gap, and returned to Bloomington in time for me to take my final oral examination, complete my degree, and start teaching as a substitute for Kinsey. We lived with Evelyn's mother and her young brother James in a big old Victorian house on the corner of the campus where the Law School now stands.

Brienes: How did Evelyn feel about moving to New York?

Spieth: From New Orleans I sent her a telegram to say that I would be leaving for New York at the end of January. She was quite perturbed and I would say even unhappy. As a little girl she had lived briefly in Chicago when her father was doing some graduate work there, and she knew she preferred a village to the city. She knew she could not leave her responsibilities at the Graduate School on such short notice and must consider her responsibilities in caring for her mother and young brother. In addition she had been awarded a fellowship for graduate studies and was co-authoring a book with Dean Payne. But she accepted the situation gracefully after being rather startled by the first impact of realizing that we were going to be separated for a period of time and that we would eventually be living in a really big city.

Brienes: How long was the separation?

Spieth: It lasted until the fourth of July, 1932. I went to New York the third of February, so we were separated for five months. She did come to visit me during spring vacation, when she was supposed to stay only seven days but remained for two weeks. It was Dean Payne who was then perturbed [laughter] but she managed to smooth the matter over when she got back to Bloomington.

Spieth: It was a very busy time for her. She had completed her A.B. (not to be granted until June, 1931) piecemeal over the years because she worked full time, and could take classes only at eight and one o'clock. Occasionally a faculty member would give her special classes. One professor came to her office and another met her at the Library after five in the afternoon for special courses by herself.

In addition to these after-work enterprises, President Bryan (who was retiring that year) was giving a final summing up of his long career in Philosophy, and apparently she was deemed the only person on the entire campus who was proficient enough to take down his speeches verbatim.

During the first half of 1932 she was doing all of these things plus training her replacement at the Graduate School office and preparing to dismantle the home; late into the night she worked on the book manuscript and wrote long letters to me.

When she arrived at Cold Spring Harbor where I was teaching that summer, she was utterly exhausted. In fact her respiratory system was impaired and her right arm was semi-paralyzed and had to be carried in a sling.

Brienes: Just from cramps?

Spieth: From over-exertion and over-use. I remember that during the rest of July and August she slept about fifteen to eighteen hours each day. We had our meals at the mess hall and lived in a small apartment on the campus which had maid service. She was able to rest up completely before we went to the city in the fall to start in on our new and exciting life there.

Brienes: That sounds like a lot! Was that for board and room?

Spieth: No, that was only for room.

Brienes: Maybe fifteen dollars a month?

Spieth: I have forgotten the exact amount. It was not exceedingly great because my total salary was \$1,500 per year. That was not a large amount, of course, in present day dollars but it was a lot to me. I had been making between \$500 and \$700 a year as a teaching assistant and I was paid for the summer when I became an instructor at Cornell University. The stipend was within walking distance of the college, and that helped.

## III YEARS IN THE BIG APPLE

CCNY -- A Great Institution

Brienes: When you first went to New York, where did you live?

Spieth: I went to New York by Greyhound bus, for the train was beyond our budget at that time. I found a room in the apartment of a family living on Riverside Drive at 138th Street. This was an Irish family. They had, I think, one child who had departed from the household by that time. The man was apparently something of a politician because he was a member of Tammany Hall, and I gathered that he was rather influential in some of the activities of Tammany Hall. Those were the days, of course, of deep depression, and I suspect that he had suffered financial reverses so he was very happy to rent his second bedroom.

Brienes: How much did you pay for it?

Spieth: I have actually forgotten, but it was a very small amount. It looked large to me [laughter]; as I think back on it, I believe I paid about fifteen dollars a week.

Brienes: That sounds like a lot! Was that for board and room?

Spieth: No, that was only for room.

Brienes: Maybe fifteen dollars a month?

Spieth: I have forgotten the exact amount. It was not exceedingly great because my total salary was \$2,616 per year. That was not a large amount, of course, in present day dollars but it was a lot to me. I had been making between \$500 and \$720 a year as a teaching assistant and I was paid \$900 for the semester when I became an instructor at Indiana University. The room was within walking distance of the College, and that helped.

Brienes: Yes, it was a convenient location.

Spieth: And there were restaurants in the immediate area on Broadway.

Brienes: It was more or less an uphill walk to the campus?

Spieth: Yes, I walked up the hill to the campus.

Brienes: Well, do you remember your first reactions when you went on the City College campus?

Spieth: Yes, I was impressed in two ways. The old campus as it then existed was quite different than it is now, much smaller. But the buildings, particularly the so-called Old Main Building, were rather impressive, especially the Great Hall which was a magnificent classic hall, equal to some of the early Gothic architecture, I think, that you would find in Europe. I had never before been on a metropolitan campus and I immediately observed that the physical size of the campus was quite small.

I also observed that the facilities for faculty members, the offices, were actually cramped. In an office of approximately 250 square feet, three young assistant professors had their desks and that was the only space we had for all our activities such as preparing lectures, grading papers, and any research we might wish to do.

In comparison to Indiana Central College, the teaching laboratories were adequately supplied with equipment. And lecture halls were quite adequate. However, it was clear that because of the relatively large student body all of the laboratories and lecture halls had to be used intensively. And they were. Not only were there the regular day students, as we called them, but there were also many students in the evening school.

Brienes: Do you remember your first impressions of the students?

Spieth: My first impression of the students was that they, or most of them, certainly came from families of no great wealth. I realize times were abnormal because the Depression was deepening badly, and it was obvious that many people were in dire financial straits. I accepted that. I had been relatively poor all my life and the fact that the students were poorly dressed did not bother me one way or the other. As soon as I began to teach, I quickly realized that the students were dedicated, serious, and hard-working. The majority of them were very competent. And, of course, they were all males. At

Spieth: that time the females who attended the College of the City of New York were sent to Hunter College. From its inception, the City College had been a male institution and remained that way until after World War II.

Brienes: Do you recollect the first courses that you were assigned to teach?

Spieth: I was immediately assigned to teach in the beginning General Biology course, Biology 1. I was not given any lectures during that first semester, but was in charge of laboratory sections. I had four laboratory sections that met four hours a week, so I was teaching students, directly facing them, sixteen hours a week, which was a standard teaching load in Biology at City College.

Brienes: You were working in the laboratory with the students, so you would have been working pretty much on an individual basis?

Spieth: Yes, on an individual basis. Actually, the General Biology laboratory had been built originally as a greenhouse, a very large one, placed on the top floor of the south end of the main building. It had been converted into a laboratory with associated storage and preparation rooms. Each hour of the day there were forty students in the laboratory. There were two instructors, one for each twenty students. I was, therefore, responsible for eighty students. The two teachers shared in the preparation of any laboratory examinations and also shared in grading the students, so actually the two of us shared 160 students.

Brienes: Was this a standard assignment for incoming assistant professors to take these labs?

Spieth: It was a standard assignment for all professors except the chairman of the Department. We each faced students sixteen hours a week. It did not matter whether they were laboratory hours or lecture hours. That was the standard teaching load.

Brienes: Was there a large lecture connected with this laboratory?

Spieth: Yes, there was.

Brienes: Do you remember who taught that -- at that time?

Spieth: I do not remember who gave the lectures that first semester I was there. Actually there were two lecturers, because it was a very large class, you see, and the lecture hall could seat

- Spieth: only approximately half the students. The laboratory sections started at eight o'clock in the morning and continued until six o'clock in the afternoon, five days a week plus half a day on Saturday.
- Brienes: That's quite a big group when you put them all together.
- Spieth: Yes, since in each section there were forty students. The laboratories ran for two hours a session, but each student spent four hours per week in the laboratory.
- Brienes: Who was responsible for structuring the course? Was it the lecturer who handled that?
- Spieth: Dr. Arthur Dawson (a Canadian and Harvard Ph.D.) and others who lectured plus those who were teaching laboratory sections structured the course. So we all had a hand in it. It was very democratic. Dawson was responsible for seeing that staff meetings were held and that the final decisions regarding grades were determined and filed.
- Brienes: I do not know how they teach this type of course there now or anywhere, but is this still the case?
- Spieth: It is more or less standard that you have two or three hours of lectures each week plus a laboratory session -- one or two laboratory sessions, depending upon the number of units in the course.
- Brienes: But today would not teaching assistants be doing the work?
- Spieth: Yes, teaching assistants would be handling much of the laboratory work, but you see CCNY was an undergraduate institution; there were no graduate students and we had no teaching assistants.
- Brienes: Did you not get any from a school that had a graduate program, such as Columbia University?
- Spieth: Yes, there were a few members of the faculty who were obtaining their doctoral degrees at one of the other institutions in New York City. Such men were doing the same duties I have just described except that their activities were restricted to laboratory instruction and usually did not include any lecturing except under circumstances where they were better prepared perhaps than anyone else in the department. But these individuals were relatively rare. As I remember, out of a departmental personnel of about forty people, there were only three such people at that time.

Brienes: The faculty in the Department of Zoology was about forty?

Spieth: Yes.

Brienes: Before going on, can you give me some assessment of the quality of that department when you first went there? Perhaps compare it to other institutions?

Spieth: In comparing the department to other institutions, you would have to make a distinction between university departments and college departments. Since the institution was an undergraduate college, not offering graduate work, it had not attracted into the senior faculty the kind of individuals you might have expected at a university. There was no emphasis placed upon research. If a man wished to do research, it was certainly his prerogative and both the department and the administration appreciated the fact that he was so inspired. However, if he did not engage in research, it was no serious hindrance of any sort against his position as a respected member of the faculty.

It so happened, for a variety of historical reasons, that there were not a great number of senior faculty when I went there. The institution had not grown much until the middle twenties so until then the faculty was small. The senior men basically were not interested in research, but they were adequate scholars. One of them, a man by the name of Dr. Goldfarb was very active in the Federated Society for Experimental Biology, and was editor of that organization's journal.

Brienes: What was the Federated Society?

Spieth: This was an organization devoted to experimental biology. Many faculty members at the medical, dental, and nursing schools belonged to it. Goldfarb was certainly one of the two outstanding members of the Department.

Brienes: Do you recall his first name?

Spieth: His name was Abraham Goldfarb. The head of the department was Axel Leonard Melander. Before coming to City College in the late '20s, he had had a distinguished career at Washington State College, now known as Washington State University, at Pullman, Washington. He received his Ph.D. at Harvard and had been not only head of the Department of Entomology at Washington State but also had been the State Entomologist. He was well known as one of the outstanding entomologists in the country.

Brienes: What was his specialty?

Spieth: He was a student of Diptera, the flies. He had run into serious political difficulties because of his insistence on insect control and related matters in the State of Washington.

Brienes: I am not clear on that. Could you explain further?

Spieth: Well, it was like our problems of today in the control of pest insects. There are various methods of approaching each problem. As a well trained biologist, Melander found at times that his suggestions were counter to those of the political powers of the State. For example, he found in a small apple orchard a population of the San Jose scale which had become immune to arsenic. Such things as DDT and all of our modern insecticides were unknown in those days. This was actually the first example, so far as I know, of insect resistance having been recognized. Today we know about it very well. But he found this resistant population in an isolated five-acre orchard, and he understood the meaning. Because of his authority as State Entomologist, he ordered that that orchard be completely destroyed and the trees burned. Naturally the man who lost the orchard was not very happy, and generated political discord over the matter.

In dealing with the general public, a man like Melander was laboring under what I call the law of accumulative grievances. He had been in the State a long time and he simply became irritated and weary of the constant haggling of this sort. When City College was looking for a new departmental head, he applied for the job and was accepted. That was in 1928. Soon afterwards the student enrollments at CCNY began to increase rapidly. Since the teaching load was sixteen hours per week, he could divide the number of hours involved by sixteen and acquire as many new faculty members as were needed. If he could show the need for more faculty, the City of New York provided the resources.

Brienes: Those were the good old days! [Laughter].

Spieth: Well, the department had grown very rapidly.

Brienes: I would imagine it was probably a result of the Depression, forcing students back to school.

Spieth: That's right. It was a combination of two things. It was somewhat similar to what happened after World War II. Technological developments had stimulated society to the point that

- Spieth: it was clear more educated individuals were needed and the student body had consistently grown during the late '20s. When the Depression arrived, that really stimulated student enrollment further.
- Brienes: And especially since that was a tuition free school. Did you get to know Dr. Melander well?
- Spieth: Very well, indeed. The summer after I joined the faculty, Dr. Melander's secretary (a faculty wife) resigned to have a baby. There was only one secretarial position in the Department of Biology with a faculty of forty people. Evelyn became the secretary and so we were both affiliated with the same department.
- Brienes: That was in '32?
- Spieth: Yes, she joined the staff in the fall of '32.
- Brienes: And did she remain as the secretary for a period of time?
- Spieth: Evelyn remained as secretary of the department until the end of 1940.
- Brienes: Now, you had a son. Was that when your son was born?
- Spieth: Yes, he was born in June of 1941.
- Brienes: Did she then return?
- Spieth: She did exactly the same thing her predecessor had done. She retired when she had her baby [laughter].
- Brienes: So she worked there from '32 to '41?
- Spieth: Yes. I will show you later the letter she got as a compliment for keeping the department all in one piece [laughter].
- Brienes: You said you did get to know Melander well. Did he become a friend of yours?
- Spieth: Oh, a very close friend.
- Brienes: In what ways do you think he influenced you?
- Spieth: As a member of the department his influence was of a personal nature perhaps more than of a scientific nature. He was a competent scientist and, of course, we were both working in the same general field and so we discussed matters pertaining

- Spieth: to entomology. Also, he had taken his degree at Harvard under William Morton Wheeler and Kinsey, my mentor, had taken his degree under Wheeler at a later date.
- Brienes: So you were sort of related [laughter].
- Spieth: In a sense we were sort of related. Mrs. Melander is an interesting woman who, incidentally, is still alive and living in Riverside, California, at the age of ninety-nine.
- Brienes: Do you remember her first name?
- Spieth: Mabel. She was quite protective of Dr. Melander in many ways. Melander himself was a rather shy man who did not ordinarily express strong opinions, although he might hold them. But he tended to be, in the eyes of those who were not intimately connected with him, aloof and taciturn. When one learned to know him personally, on a social basis, he was not that type of individual at all, but was fun loving and with a gift for sharing his deep love for natural history. We became good friends.
- Brienes: Is that what you meant when you said his influence was personal?
- Spieth: Yes, that's what I meant. Melander's own research work was different from mine. He worked with the Diptera and I was then working with Mayflies (Ephemeroptera). He had his extensive collection at his home, an apartment on Riverside Drive, so I did not work with him in any laboratory. In fact, he was able to do research only on weekends and evenings, but he did this very consistently.
- Brienes: He was one of the few in the department who was actively pursuing research?
- Spieth: Yes. He was the only senior faculty member actively engaged in research.
- Brienes: How about Melander as a teacher? I gather from what you said that he couldn't have been that good.
- Spieth: As chairman of the department, Melander did not have a heavy teaching responsibility. He was not a brilliant lecturer to a large class. He was an excellent lecturer to a small group. He did sometimes give lectures to the large General Biology class. But his voice was soft and those were the days before we had good amplifying systems; as a result he was not deeply appreciated by some of the students. He taught a course in

Spieth: Genetics, but his chief concern was with the day to day operations of the department.

Brues and Melander were life-long friends and they were well known for their co-authored book CLASSIFICATION OF INSECTS which has been through several editions. They had grown up in Chicago and had gone to college and graduate school together. Brues had joined the faculty at Harvard at approximately the same time that Melander went to Washington. I suspect that one of the reasons Melander wished to get back to the East Coast was that this would enable him to see his close friend Brues frequently. This had been difficult when they were on opposite sides of the continent and a train ride from the State of Washington to Boston took four or five days.

Brienes: Aside from Melander, who were other good friends in that department? Maybe you could just take it from the beginning and pick out some who were particularly important to you on a personal basis, or in any other way.

Spieth: When I arrived there, I found that two men had come down from Harvard just preceding my arrival. William Creighton had arrived exactly one year before I did. James Kendall had arrived in the fall semester of 1931. They were both Harvard Ph.D.s and Kendall also had a Ph.D. from the University of Sofia. Creighton had taken his degree under Wheeler and Kendall had worked at Harvard under Brues. In a sense, Creighton and Kendall were naturals to interest me. We had interlocking backgrounds, scientifically speaking. We were all of us about the same height and weight, the same complexion, and we became known as the Three Musketeers.

Brienes: I see.

Spieth: Kendall was not married at that time, but Creighton was -- to a beautiful little lady whom we called Marty. Our first apartment at 45 Marble Hill Avenue was near the Creightons' place, only a couple of blocks away from the Kingsbridge Station of the IRT subway line. When Evelyn came to visit me in the spring of '32, she met Marty, Bill, and Jim. In June when the Creightons headed west on a collecting trip, they stopped to see her in Bloomington. The five of us fitted together very naturally and easily and a close friendship developed quickly.

Brienes: I see. Jim's father was manager of a large, 1800 acre estate in the Ramapos, complete with its own mountain top, lakes, extensive landscaped gardens, interesting collections of animals, some forty gardeners, a handsome Tudor style mansion and a comfortable,

Spieth: roomy home for the Kendall family. Jim's sister Aliene became a close friend. Mr. and Mrs. Kendall Sr. quickly became known to us as Mother and Dad. Skylands became our "home away from home", and the Three Musketeers and their wives (Jim married Peg a couple of years later) had many delightful weekends at Skylands.

Brienes: Creighton studied ants, setting up a laboratory in his apartment, and became a leading authority in his field. Upon his death a few years ago, his excellent collection went to the Los Angeles County Museum. Bill was a southerner of Scotch-Irish descent, of mercurial temperament that alternated with great charm to intrigue those around him. An excellent lecturer in the General Biology course, he must have left an indelible impression on many students.

Spieth: Jim Kendall taught Histology and co-authored with George Scott (a senior member of the faculty) a much used textbook in that field. He became a full colonel in World War II, heading up the Altitude Physiology Program in the Air Force. Eventually he went to Hawaii where he has worked on the histology and neurology of sharks there and in the South Pacific. Some time after Peg's death, he married Dorothy Steinbomer, a widow from San Antonio who is an artist and author, with a special interest in Mayan town planning. It has meant much to Evelyn and me that our friendship could be continued in Hawaii and through many visits on the Mainland, including a trip to Central America and Mexico with Dorothy acting as our guide.

Brienes: Two other close friendships developed later. Leonard (Toby) Sayles was a bit older and had joined the faculty three or four years before I arrived at CCNY. He was a Brown University Ph.D. and was in charge of the Comparative Anatomy course. We became good academic friends, so to speak, because we agreed well on academic matters, but we never became close friends socially. Sayles was a New Englander whose ancestors had come to Rhode Island with Roger Williams, and he had all the characteristics considered typical of a New Englander.

Spieth: The other person was William Etkin. The first year I was in New York, Etkin was at the University of Chicago completing his Ph.D., so I did not meet him until a year or two later.

Brienes: I think he may have come to CCNY in '34, according to a letter from him.

- Spieth: That would be about right. I learned to know his wife Ann before I knew Etkin personally, because I taught a course called Field Zoology in which the field work studies were done on Saturdays. The course was offered through the Evening School and women were allowed to enroll. Ann Etkin took the course in the fall of '33. I also heard about Willy Etkin from other faculty members who had known him as an undergraduate student at CCNY. They were all most appreciative of his abilities.
- Brienes: You mention Etkin's wife as going on your field trips. What course was that again?
- Spieth: Field Zoology.
- Brienes: He mentioned to me in a letter that you were kind of early in treating women on an equal basis with men out in the field. [laughter]. Do you think you can recall to what he was referring?
- Spieth: I suspect he was referring to the fact that one day we picked up a snake, a small, innocuous garter snake, and I insisted that all of the ladies in the class, as well as the men, handle the snake [laughter]. I must confess I was young and inexperienced and probably overly enthusiastic, because I think one or two of the women [laughter] never quite forgave me for my insistence. Ann Etkin, I might add, did handle the snake with facility. But one of her close friends was horrified and I am not sure that Ann has ever forgiven me completely that I made the poor trembling girl hold this snake in her hands [laughter].
- Brienes: Was this a one time incident? I got the feeling you sort of made it a habit.
- Spieth: No, I didn't make it a habit but I did insist that if women students wished to participate in the course, they must learn and participate in what all the rest of the students did. During those years I had been teaching in the summers at the Biological Laboratories at Cold Spring Harbor where women as well as men were students. I am not sure I have previously mentioned Cold Spring Harbor.
- Brienes: Yes, and I would like to get to that.
- Spieth: I taught Marine and Fresh Water Biology, a course in which we had both men and women. I insisted that the ladies could learn to collect specimens just as well as the men could. They

Spieth: might not be physically quite as adept, but if you are part of a field biology course, learning how to find, collect and handle the animals or other organisms that you're studying is mandatory. So I insisted upon such participation by the women then and I would insist upon it today whether Women's Lib had come into existence or not.

Brienes: Now you would be much in fashion if you did that. Dr. Etkin told me of another little incident that had happened, I guess, between you and him. He had something to do with guiding you to collecting areas for your field course. There was some difficulty in the New York area in finding good collecting places.

Spieth: That's right. It was difficult to find good locations.

Brienes: Do you recollect an incident where you were asked to suggest some places where Dr. Etkin could go? I think he was looking for frogs.

Spieth: He was looking for frog eggs.

Brienes: What happened? Do you recall what he did?

Spieth: No, I must confess I have forgotten.

Brienes: I'll tell you what he tells me [laughter]. He said that he asked you for some suggestions and you gave him a number, but they were all kind of out of the way and he then, on his own, discovered one. But it turned out to be one that you were using, reserving for your own use for your class. And he met you there one day [laughter]. Do you remember that now?

Spieth: Well, I should say I do [laughter]!

Brienes: He said it in a very nice way because he was indicating that both of you had kept this from each other, so I guess it was kind of a good natured thing. What were the other courses you went on to teach?

Spieth: I was assigned to the General Biology course but because of my previous training I had been appointed really to teach Field Zoology.

Brienes: What exactly is Field Zoology?

Spieth: It was called Field Zoology and at Cold Spring Harbor a somewhat similar course was called Marine and Fresh Water Biology. Actually what the course covered was not only the natural history

Spieth: of the organisms to be found but also the classification, ecology, behavior and other related features. Such a course might be called by a variety of names.

On Thursday afternoons or on weekends, we visited various kinds of habitats and collected the animals found there. In some ways the New York area was good, because we had fresh water habitats in some of the parks. We could also get samples not only in the city but in the state parks. We had marine beaches and ponds and some of the parks, particularly Van Cortlandt Park, provided hilly areas of woody habitats. For a beginning course we could, within fairly easy distance, collect in streams, ponds, terrestrial areas and marine areas. It is not easy to do so, even in Davis, these days. Consider the simple fact that most of the land around here is agricultural and there is very little fresh water here except the river which has been manipulated a great deal, and the ocean is a number of miles away. Most of the sites in New York that I am referring to could be reached by subway.

Brienes: I would never have thought that New York City would be a convenient place to look at a lot of things in natural habitats.

Spieth: We spent about half of a semester collecting and the other half identifying and studying the organisms in the laboratory. Also I lectured on the principles of classification, ecology, distribution and behavior, using the material collected by the class as examples to illustrate the general principles.

Brienes: Did you enjoy teaching?

Spieth: I enjoyed this very much. I had unusually fine students in the course which was an elective one. Most of these people were interested either in doing graduate work or else going into high school teaching. It was my own course; I was responsible for it and I had only sixteen students in each class so that I could conduct the lecture as a seminar. For supervising field work, sixteen students are an optimum number.

Since the course in Field Zoology did not involve sixteen hours of teaching per week, I also taught in the General Biology laboratories. After several years I became bored with General Biology and went to Sayles, who was in charge of Comparative Anatomy, and asked if I could teach in his course, and he agreed. The fact was, of course, that there were plenty of candidates for teaching General Biology and not so many for Comparative Anatomy. I enjoyed teaching Comparative Anatomy and from then on spent most of my time teaching it and the Field Zoology course, although in the late '40s I did teach a course in Parasitology.

Spieth: Evelyn has remarked that this course often made me suspicious of the foods she served at dinner.

In general, because I was interested in my research program and because a sixteen hour teaching load is quite heavy, I tried to keep myself involved in not more than two different courses, which meant not more than two preparations and two types of examinations. I also preferred to teach laboratory sections rather than lecturing in my second course. I resisted lecturing in Invertebrate Zoology or General Biology because more preparation would have been involved.

Brienes: But your field course would always involve lectures?

Spieth: Yes, but it was my own course and was in an area in which I was deeply interested and for which I was well prepared.

Brienes: Do you recall the evolution of your teaching style? What were the influences that made you teach in certain ways and relate to students in certain ways? For example, one of your students wrote to us that you had what he thought was a close personal relationship with your students. When I was at City College, I don't remember any student having much of a close relationship with his professors. And yet you would have students over to your home and treat them almost in a way like young colleagues of yours instead of students who were getting in your way. How did you develop that kind of attitude toward teaching? Where did this come from?

Spieth: I suppose it came from Morgan and myself. It came perhaps to a certain extent from Kinsey because he did some of these things. But most of it seemed a natural development. Here were intelligent, hardworking, energetic, interesting and interested young men. For the field course, it was easy, for we were in the field together in a rather informal way. But even if I were in the laboratory, I was interested in what the students were doing — what they were seeking. I certainly was never a charismatic lecturer. Using language in the sense of being extremely fluent and suave is certainly not one of my abilities. But to yak about biology [laughter] with interested students was one of the most stimulating things I have experienced.

Brienes: That's a really nice attitude to take.

Spieth: Perhaps the chap who wrote you was a member of the Naturalist Seminar. After we had moved from 45 Marble Hill to 52 Adrian Avenue, such a seminar met at our home. On Adrian Avenue we

Spieth: had the lower half of a duplex which provided more space. Several students had asked if I would meet with them for informal discussions of a seminar type. At first we held such meetings on the campus in the late afternoon, but that did not work too well, as I remember. Then we began to meet in the evenings, but that meant I had to return to school and we had to sit around on hard benches, so I suggested that the students come to our home and this they did for quite a number of years.

The group was kept small. No newcomer was eligible unless he had the unanimous vote of the established members. They voted on the individual; I did not. In fact I had nothing to do with the composition of the group, but must admit I was pleased with the calibre of the chaps. Of course, the group changed when some of its members were graduated from college and were then replaced by younger members.

Perhaps it is of interest to note that these students received no credit for the work done in this seminar, which was strictly an outside interest group.

In the spring of 1941 we moved across the Hudson River to Tenafly, New Jersey, and the boys still wanted to come there even though it meant a longer journey for them. Some of them did not have enough money to pay the bus fare across the bridge and on to Tenafly, so they walked across the bridge where I met them and drove them home with me. It usually meant two trips, some eight miles each, to get them all to the house. We reserved each Friday night of the academic year for these meetings.

When the seminar reports had been made, we usually gathered in the dining room where Evelyn served some kind of refreshments and we had more informal discussions and often music. Evelyn and I always thought we learned more about music and art from these students than we were able to give them. You see, in the New York of those days (perhaps it is still true) youngsters had free access to excellent libraries, to concerts, parks and museums and this group of bright boys had made the most of those opportunities. It was usually some time after midnight that the group disbanded and we drove them back to the bridge for their trek to their homes in the city.

Most of these youngsters had never been in a house before; they sometimes tossed a coin to see who would have the privilege of climbing the stairs to our study on the top floor for some book needed in our discussions. No matter what the weather,

Spieth: they enjoyed a fire in the fireplace. On their first trip to Tenafly, they brought us half a dozen roses (we always wondered where they found the money for this) and wanted to help plant them and watch them grow. Once they found the wherewithal to bring us a set of operatic records, knowing of our interest in opera.

Brienes: Now this group of selected students.....

Spieth: They selected themselves.

Brienes: Well, all right; but they attached themselves to you. It was a constant group over the years that would change membership?

Spieth: That's right.

Brienes: Do you remember some of them -- some of the more illustrious members of this group?

Spieth: Well, over the years there were a good many of them, and I regret that I have forgotten the names of some of them, though I could probably find records in some place in my files. Gerald Posner was one of the later members. There was a chap by the name of Park, a black who eventually became a physician. Mike Fink was a conscientious objector during World War II for whom I wrote a letter saying I did not happen to agree with his objections but believed in his sincerity. He later surprisingly enough turned up as a Methodist minister in Riverside, California.

Brienes: I can throw some other names at you.

Spieth: All right. Please do.

Brienes: Leonard Greenfield.

Spieth: Greenfield was a good friend of Posner. They both went into graduate studies in marine biology at the University of Miami. Greenfield is still in Florida.

Brienes: I know others in the group at the same time Posner was. One was Robert DeMars.

Spieth: Yes. Robert DeMars is now at the University of Wisconsin. He did his graduate work at Indiana University at the time that Watson of DNA fame was there also as a graduate student, and they became friends.

Brienes: And Martin Sachs who later went to teach at CCNY.

Spieth: He became head of the Department of Biology there.

Brienes: I see.

Spieth: There were others. Louis Levine was one who did his graduate studies at Columbia University under Dobzhansky, and Sheldon Aaronson who is Professor of Microbiology and Biochemistry at Queens College.

One of my students whose name is not in this list because he graduated a bit earlier before this group got started is Bob Wagner who did his graduate work at the University of Texas and who has just retired from there as a Distinguished Professor of Zoology. He has now started a new career at Los Alamos.

Brienes: Did a high percentage of these students go into graduate work?

Spieth: To the best of my knowledge, all of these youngsters in the Naturalist Seminar either got their Ph.D.s, M.D.s, or (in the case of Mike Fink), a Doctorate in Theology. [laughter].

Brienes: Would you say that more of your students were going into graduate work than those of other people, or was this pretty much average?

Spieth: No, I think I encouraged them more in going on than did other faculty members because of the simple fact that I was teaching the rather specialized course in Field Biology. Also, I was fortunately not involved with the pre-professional students except for those taking Comparative Anatomy. The students who were attracted to Field Zoology and to whom I was attracted were interested in teaching and research rather than in the areas of medicine, dentistry, and so on. I knew many of the pre-medical, pre-dental students well, and if one of them sought help I always tried to be of assistance. I think that perhaps Willy Etkin and I worked more closely with students than did most of the faculty at CCNY.

Brienes: I get that impression from reading some of the letters I have received. At the get-togethers of this little group that you had apparently there was lots of talk, eating, and apparently there was some story of Horrible Herman that at least Gerald Posner remembers. He remembers vividly Dr. Spieth telling the story of Horrible Herman. What is he referring to?

Spieth: Oh gracious, I will have to get my wife to help me remember that, if she can. The details I do not recall right now, but there is a story of Horrible Herman.

Brienes: You're not the Horrible Herman, are you?

Spieth: No, no!

Brienes: Okay. It just struck me here [laughter] and I couldn't imagine what it was.

You seem to have enjoyed doing your teaching at the University. Before we leave City College, I would like to go beyond your own students, to your experiences with the campus, perhaps with other students, and deal with the whole question of the City College campus in that turmoil of the 1930s and some of your experiences in that regard. For example, dealing with the question of campus politics. Did you find yourself involved at any point in radical activities that were occurring in the '30s?

Spieth: In a sense I was marginal in my activities with respect to politics of any sort on the campus. There were two reasons for this. One was because Evelyn was working in the Biology Office and the chairman perforce would be involved in campus administration and campus politics, whether he wished to be or not. For me to have entered into such activities would have been difficult for the chairman whose secretary would obviously be privy to such matters. So I eschewed politics. Another and perhaps the real reason I attempted to avoid politics was the fact that there simply were not enough hours in the day for me to teach the way I wished to teach and also to do my research. I was determined to pursue a research program. It just never occurred to me to do otherwise.

American Museum of Natural History

Spieth: When I first found myself in the little office room that three of us shared, I faced a real problem. Out of my own pocket I had paid for the shipment of my collection of specimens of Mayflies from Bloomington to New York City. They all arrived and there just was no place to stack them, let alone study them. However, I had become acquainted with the American Museum of Natural History which I knew to be a great educational and research institution. I had also become acquainted with Dr. Frank Lutz, chairman of the Department of Entomology at the Museum. He was a friend of Melander and was, of course, familiar with Kinsey and Kinsey's work. Out of desperation I went to Lutz and asked if there was any possibility that I could bring my collection to the Museum and have space to work there. People have been kind to me in critical times all my life. He said yes.

Brienes: When did you ask him this -- very shortly after you arrived in New York?

Spieth: Yes, very shortly after I arrived. One thing, of course, I should add is that I also joined the New York Entomological Society, an organization which met once a month in the Museum which was unofficially the headquarters for the Society. At its meetings some member of the staff of the Museum's Department of Entomology usually handled the routine setting up for the meetings, the necessary correspondence and so on. A man by the name of Curran (Dr. Howard Curran) was the Curator of Diptera at the Museum and I had learned to know him the previous summer when he and I taught at the Cold Spring Harbor Biology Station. That was the summer of 1931 before I came to New York to live. I suppose I talked to Curran about my need for research space. Anyway I received space for my collection and for conducting my research at the Museum.

Typically I would teach a laboratory at City College, take care of my other duties there, then run down the hill to catch a subway and go to the Museum where I spent the remainder of the day, sometimes only a couple of hours at research, and then would get home about six-thirty or seven o'clock in the evening. Classes at CCNY started at eight in the morning and I always tried to get assigned to the early sections.

Brienes: What were the alternatives for you to do research besides at the Museum? Where else would you have done research in New York City?

Spieth: No place.

Brienes: So that was it.

Spieth: That was it, yes.

Brienes: Now I was in that Museum many times and as I told you before I have no understanding of what's behind that door. What is the set-up at the Museum? For your research, just how was space set up for it and how was it equipped? Could you just describe the facilities there?

Spieth: There have been some changes since I left there, of course. The first four floors are exhibition floors and the fifth floor consists of offices and laboratories, and a library. There may have been some modifications and buildings have been added now that are solely devoted to research. During my years at the Museum, the majority of research work was done on the top floor of that large, sprawling building.

Brienes: What kind of research was being specialized in there?

Spieth: There was a whole variety of subjects. Of course, Entomology was the one I knew best. There were Departments of Anthropology, Paleontology, Invertebrate Zoology, Mammology, Birds, Fishes, and just a few years before I arrived there had been established in conjunction with the Department of Amphibians and Reptiles facilities for the study of Behavior. The ones I spoke about first (Anthropology, Entomology, Birds, Fishes, Invertebrates) had investigators who were dealing primarily with preserved specimens. The new addition was under the direction of G.K. Noble who was chairman of the Department of Amphibians and Reptiles, and it was designed to deal with living material.

The Department of Entomology had in its exhibition hall a few living creatures such as big cockroaches that were two inches long, a black widow spider and a tarantula and a few other things. But as the term Museum indicates, the scientific material was primarily preserved material.

The American Museum was most famous for its collections of birds and fossil animals, two areas really well known the world over. Anthropology and Archeology had competent investigators. Henry Fairfield Osborne had been, you know, one of the great paleontologists of the early part of this century. The bird collection also was very important and extensive and just before

Spieth: I arrived in New York the Museum acquired the Rothschild collection of birds. In fact that is why Ernst Mayr had become a member of the staff of the American Museum -- simply because he had been the curator for Rothschild in England and when the collection was acquired by the American Museum, Mayr went with it.

Brienes: When did this happen? When did he come here?

Spieth: Mayr came to New York in 1931 -- a few months before I did.

Brienes: Let's talk about the people you met at the American Museum and see what kind of influence they had on you. I know there was a group called the Sandwich Luncheon Group, or at least you ate lunch together.

Spieth: Yes. It was a brown bag group, so to speak. We carried our lunches and we would eat in one of the preparation rooms. The composition of the group varied over the years. It really did not get fully organized as a group until the late '30s or early '40s.

The individuals involved included half a dozen people or so. Mayr might be there. Frank Beach (who later went to Yale and is now on our Berkeley campus) was a young Ph.D. who had just finished his degree at Harvard and had his first job with Noble in Animal Behavior. Mont Cazier from the Department of Entomology, Ned Colbert from Paleontology, and Charles Bogert from the Department of Amphibians and Reptiles were rather regular "members". On the days when I could be at the Museum at lunchtime, I joined the group. Other people from Anthropology, Archeology or elsewhere would drop in occasionally. We would eat our lunches out of our brown bags and argue about the state of the world, the state of science, and about various personalities in our respective research fields. We were all young, brash, and working hard. Beach, Colbert, and Mayr even at that time had international reputations.

Brienes: I would imagine that for you there was much more stimulation as a researcher than from your colleagues at CCNY.

Spieth: There is no question about that.

Brienes: Could you assess the kind of influence being with these people had on you? That's a rather broad question but I do not know how to narrow it down.

- Spieth: It simply kept me alive scientifically, because while at City College I could talk with Creighton (he was working in the field of systematics) and I also could talk with Etkin who was an embryologist, but we weren't really dealing with the same things although we appreciated and shared some basic problems and ideas. The group at the Museum was varied but they were engaged full-time in research, except for Colbert who was involved in teaching one course at Columbia.
- Brienes: Most of them were full-time at the Museum?
- Spieth: At the Museum, yes. I was really the only Auslander.
- Brienes: I had assumed that they were also teaching.
- Spieth: No, no. These people did not teach; they just simply did research.
- Brienes: The institution you were in didn't stress research. At the Museum you were right in the middle of where a lot of things were going on.
- Spieth: That's right. I had in many ways the best of two worlds, but it was sometimes fatiguing.
- Brienes: To keep up with both worlds?
- Spieth: Not only to keep up with both worlds intellectually, but physically also. When I began to teach a graduate course at Columbia one semester a year in the late afternoon, I had a third set [laughter]. At Columbia I was with a University faculty. So I would be with a research faculty at the Museum and at Columbia, and with a college faculty at CCNY.
- Brienes: Now I will go way in over my head on this, but when you were sitting around the table having your brown bag lunches, presumably a lot of scientific matters would come up.....
- Spieth: Scientific matters did come up for discussion, but you must realize that that was a period when Hitler was over-running Europe. Ernst Mayr had, of course, been reared and trained in Germany and his family was still in Germany, so he was a European with deep concerns. The rest of us were from various parts of America. Beach was from Kansas; Cazier came from Utah; another person who came was Mitchener from California. Curran would occasionally be in the group; he was a Canadian

Spieth: who had fought in World War I. Roosevelt was changing certain things in the American economy and so often we argued or discussed politics -- both national and European, and sometimes science. [laughter].

Brienes: We have been speaking about the work done at the American Museum of Natural History, and I ask you to give me a vignette of Ernst Mayr who was one of your colleagues there, and of some of the other more prominent people you knew there. Why don't we start with Mayr. Will you tell me who he is and why he was important to you?

Spieth: Ernst Mayr was born and reared in Germany and during his early educational experiences he decided to become a medical doctor. But when he entered the University of Berlin he became interested in biology. He became a student of an extraordinary German scientist by the name of Stresgeman who specialized in the study of birds. I do not know all of the details of later events or who exactly was responsible, but it is clear that Mayr was an extremely competent young man. Lord Rothschild had a large bird collection and he somehow induced Mayr to come to England to serve as curator of the collection. Rothschild, as I noted earlier, eventually sold the collection to the American Museum and Mayr came to this country with the collection. The Museum had sent the Whitney Expedition to the South Pacific and Mayr had been a member of it. He collected birds in Indonesia and the South Pacific and then in 1931 came to New York.

Mayr is a highly intelligent man with a broad understanding of biology and particularly evolutionary biology. I became acquainted with him almost as soon as I began to spend time on my research at the American Museum. Surprisingly enough, although we had quite different backgrounds, we agreed on many facets of evolution. Mayr unquestionably had a much deeper understanding of the problem than I did, and he was devoting full-time to research, quickly becoming known as one of the leaders in the field of evolution.

During the 1930s many of the fundamental questions about evolution were being carefully re-analyzed. As a result of the work of Mayr and also that of Theodosius Dobzhansky (a geneticist at Columbia University) and of G.G. Simpson (a paleontologist at the Museum), there emerged from their combined studies the so-called synthetic theory of evolution, or the neo-Darwinian theory of evolution which involves integration of ideas from genetics, paleontology, systematics, zoology, and

Spieth: botany. There were other people in other parts of the world, of course, who contributed, but in America these three men have been among the world leaders. Mayr, because of irritation over a book written by another famous German zoologist by the name of Goldschmidt, in 1941 published a book on Systematics and the Origin of Species.

He still is, as he was then, a hard worker with a superb memory and the added ability of knowing several European languages. He has become one of the outstanding men in this century in the field of evolutionary biology and one of the leaders. He left the American Museum of Natural History in 1953 to become the Agassiz Professor and head of the Harvard University Museum of Comparative Zoology. A few years ago he was the Storer lecturer on this campus. Today he is retired and turning his attention to the history of ideas, especially in the areas of evolution and systematics.

Brienes: Now Mayr had a dispute with Goldschmidt. I am not clear what the nature of the dispute was.

Spieth: It was over the theory of evolution.

Brienes: Could you describe in laymen's terms what was disputed? [laughter].

Spieth: It would take a ten or fifteen minute lecture to explain it. Suffice to say, however, that although Goldschmidt contributed enormously in the field of zoology, insofar as his ideas on evolution were concerned they are simply not accepted today as to why and how evolution occurred.

Brienes: Mayr wrote to me that once he went with you to attend a Goldschmidt lecture at Yale. Are there any recollections that you have of that?

Spieth: Oh, it was the most amazing day!

Brienes: What was that?

Spieth: I don't remember the exact date but it was after World War II. Goldschmidt was giving the famous Silliman lectures at Yale. After the particular lecture we attended, Mayr and I talked with him for awhile. Mayr knew Goldschmidt very well; I knew him only slightly. We commented about his lecture and some of the things he had said in it -- not critically. But Goldschmidt was stimulated to make the following statement:

Spieth: "I am sure that the first bird that appeared on the surface of the earth hatched from an egg that had been laid not by another bird, but rather by a creature that any zoologist would have called a reptile."

Well, it was Goldschmidt's main thesis that new species and new evolutionary branches arose by macro-mutation. Now if you can imagine a large lizard laying an egg and that lizard egg hatching out into a pigeon, you would have Goldschmidt's concept!

Brienes: A full-grown pigeon?

Spieth: No, but a normal, typical pigeon chick which would grow up to be a pigeon.

Brienes: And macro-mutation refers to just the extent of this mutation -- in one generation?

Spieth: That's right.

Brienes: What did he believe caused the mutation? Did he believe in the genetic theory?

Spieth: Oh yes. He believed in the genetic theory of mutation. Of course, I should point out that when I was a graduate student and during my early days as a faculty member many, many zoologists did not believe in Darwinism. They accepted the fact that evolution had occurred, but Darwin's theory of natural selection was not accepted. And some people -- individuals such as Goldschmidt -- felt that macro-mutation was responsible. There were botanists such as DeVries in Holland who proposed a somewhat similar theory. Today, with the rare exception of an occasional paleontologist, we have no doubt that Darwin's theory of natural selection is correct. Modern developments in genetics and particularly the discovery of DNA and how it operates in the life of an organism leave little doubt that natural selection operating upon populations is what is responsible for all of evolution that has ever occurred, is occurring, or will occur in the future.

Brienes: But I gather you are saying this was still in dispute in the late '30s and into the '40s.

Spieth: Yes. Mayr's book clearly discredited the Goldschmidtian viewpoint, as did a book written by Dobzhansky and several major publications by Simpson and the efforts of many other individuals.

Brienes: What they did was to fix or at least offer proof or corroboration for Darwin's theory of natural selection?

Spieth: And the evidence came from numerous sources, especially from genetics, systematics, ecology, and paleontology. All of these things put together formed the basis for the support of natural selection. This point of view was strictly synthesized from numerous sources. It thus became known as the synthetic theory of evolution.

Brienes: When you began at the Museum of Natural History, what was your position with regard to evolution?

Spieth: I had had no doubt since I was a graduate student that natural selection was the driving force.

Brienes: Well, could we skip back just for a second for one or two short vignettes of other people working there?

Spieth: The man in charge of the Department of Entomology, Frank Lutz, was an extraordinary person in his own right. Reared a Quaker, he had taken his doctoral degree at the University of Chicago when Chicago was a young institution. Amongst other people, he worked there with Charles B. Davenport. Finishing his doctoral degree, Lutz went to England and spent a year with a famous English zoologist-geneticist by the name of Bateson, who by the way was an ardent opponent of natural selection. During this period, Davenport left Chicago and went to Cold Spring Harbor, New York, where he founded the Carnegie Institute for the Study of Evolution. When Lutz returned from England, he joined the staff at Cold Spring Harbor and began to work with Drosophila. He chose this organism because of his previous training and particularly as a result of his work with Bateson who was a biometrician and geneticist. Lutz directed his attention to the veins in the wings of Drosophila melanogaster, and attempted to select and try to change the wing pattern of the flies. Interestingly enough, he actually succeeded in doing this, but because most people at that time believed that mutations occurred in large jumps, most people said that Lutz had simply allowed his stocks to become contaminated and that he had not achieved the selection that he thought he had.

Among other things, Lutz noticed a white-eyed fly in his stocks and one day when Thomas Hunt Morgan visited his lab, he not only showed Morgan how well Drosophila bred and could be handled in the laboratory but also pointed out that he had the

Spieth: white-eyed stock. He gave the stock to Morgan who took it back to Columbia University and from it he (Morgan) recovered the first mutation with which he began his famous studies.

Lutz left Carnegie Institute and went to the American Museum to become chairman of the Department of Entomology. He, like many men of his period, did not understand quite how natural selection could work and so he never really accepted Darwin's theory. He was, however, a competent entomologist and an excellent scientist, who published a number of articles in the field of natural history and entomology. I found him a delightful man although we disagreed on practically everything we talked about [laughter].

Brienes: You stayed away from subject matter --?

Spieth: Oh no. We argued very vigorously but sympathetically with each other over such things as how evolution could have been involved in the development of mimicry and parasitism in organisms, and about other subjects of this sort. A small man, with a neat goatee, quick witted, very courteous and an ardent Quaker.

Brienes: Are there any other people at the Museum that you particularly want to make comments about?

Spieth: If I started in, I would have to include a whole group of distinguished people, but I have spoken of the two men to whom I was unquestionably most intimately related. Needless to say, I have always been grateful to the Museum for providing me space and also for the intellectual stimulus provided by my friendly colleagues there. After I had been working at the Museum for a time, I was made a Research Associate, listing me as a member of the Department of Entomology. When we left New York, I gave to the Museum my Mayfly collection, thus making it available for interested specialists. Since I can no longer work there, I lost the research title but the Museum then made me an Associate.



Herman Spieth - Cold Spring Harbor  
Biological Station 1936

Spencer: What institution was it affiliated with? -- any particular one?

Spieth: No. It was an independent institution founded by local citizens but administered and cared for at first by the College personnel, especially byavenport himself. By 1911 it had its own director and staff.

Spencer: Students?

Spieth: It happened at that stage in the development of interest in zoology in America that many institutions, especially the inland ones, insisted that their graduates should spend at least a summer in a marine biological laboratory. When the Cold Spring Harbor Biological Station was founded not long after that time, it was one of the first to become the major such institution on the East Coast and became the major such institution for the study of marine biology work. Not only students but also teachers were interested in working with the station with an emphasis on those such as Woods Hole and Cold Spring Harbor.

Cold Spring Harbor Biological Station

Brienes: You have mentioned a number of times working at Cold Spring Harbor and you said Lutz was also there. Could you tell me now about the Cold Spring Harbor facilities, how you got involved there, and what you did there. I know you were there from about 1931.

Spieth: As I have related, Charles Davenport founded the Carnegie Institute for the Study of Evolution on Long Island at Cold Spring Harbor, a small inlet off the Sound. Davenport had a stimulating personality and wide-ranging ideas. In the area of Cold Spring Harbor there lived a considerable number of people who were rather wealthy, and he induced them to provide money for what I suppose could be called a subsidiary parallel institution known as the Cold Spring Harbor Biological Station.

Now the Harbor had been one of the major whaling ports on the East Coast during the nineteenth century. The whalers had built a number of homes there. The Carnegie Institute was immediately adjacent to these and somehow (I do not know the complete history) Davenport purchased these old homes or they were donated to him. Monies were donated to build two laboratories which served for the teaching of classes offered during the summertime for graduate students coming from other institutions. By the time I arrived there in 1931 the physical facilities had been expanded.

Brienes: What institution was it affiliated with? -- any particular one?

Spieth: No. It was an independent institution funded by local citizens but administered and cared for at first by the Carnegie personnel, especially by Davenport himself. By 1931 it had its own director and staff.

Brienes: Students?

Spieth: It happened at that stage in the development of instruction in zoology in America that many institutions, especially the inland ones, insisted that their graduate students spend at least a summer in a marine biological laboratory. Woods Hole was founded not directly but indirectly by Agassiz on Cape Cod and became the major such institution on the East Coast where biologists went. Not only students but also faculty members interested in working with marine animals went to laboratories such as Woods Hole and Cold Spring Harbor.

Spieth: It so happened that Payne of I.U. went often to Woods Hole, but he occasionally visited Cold Spring Harbor and knew people there. In the late '20s and early '30s Sydney Kornhauser of the Medical School at the University of Louisville spent his summers at Cold Spring Harbor where he was in charge of the course in Marine Biology. He knew both Payne and Scott. As I have said earlier, Kornhauser called Scott in the spring of 1931, saying that he would need a new assistant at Cold Spring Harbor that summer and he hoped to get someone who knew something about fresh water biology. He himself was well acquainted with marine biology but did not know fresh water biology. I was recommended for the job and Kornhauser accepted me. So I went to Cold Spring Harbor first in the summer of 1931.

There I became acquainted with marine biology, a field in which I had done no previous work. At that time the director of the Cold Spring Harbor Laboratory was Reginald Harris who had married Charles Davenport's talented daughter Jane. Harris was an experimental zoologist and he was just introducing year-round research at the laboratory, not in the field of evolution but in certain related areas. He brought over from Denmark a man by the name of Friese who was a specialist in radiation and who began the early work of radiation on animals for experimental purposes.

Brienes: To see if they would mutate?

Spieth: Not only mutations but also other effects and the uses of radiation. So this is how I became connected with Cold Spring Harbor; I went back there in following summers and eventually when Kornhauser decided not to teach in the course I was put in charge of it.

Brienes: Did you live out there?

Spieth: We lived in one of the whaling homes that had been divided up into apartments. The visiting faculty were all given apartments in these interesting big old homes.

I might add that one of the reasons -- an incidental reason but interesting -- why Cold Spring Harbor had been chosen for a whaling center was that there was a spring on the grounds, the water from which was a prized item. When put into kegs and on board ship, the water did not become ill-tasting for many, many months would retain its original flavor, not only because of the nature of the dissolved minerals in it

Spieth: but also because an algae was included in it. The algae would multiply inside the water kegs and somehow the interaction of all of these things kept the water fresh. The Cold Spring Harbor whaling water was considered the best on the high seas in those early days [laughter]. The harbor was an excellent port for whalers and they established their headquarters there.

Brienes: Now, besides teaching the course, were you actively engaged in pursuing some of your own research there?

Spieth: The Mayfly fauna on Long Island was extremely poverty stricken and I did little research there. In fact, I was too busy to do research because the students came for six weeks and each took only one course. During those six weeks the faculty literally owned the students body and soul, so to speak. We started out in the morning at eight o'clock in the laboratory or in the field and we finished at eleven or twelve at night. The only free time was at lunch and dinner, or occasionally in a soft-ball game. We literally lived, ate and slept Field Biology. Since I was interested in evolution and systematics, we talked about these principles at great length.

Brienes: Did you make any lasting relationships with colleagues that you met at Cold Spring Harbor?

Spieth: Oh yes, indeed, but again I would not want to enumerate more than a few. At the Carnegie Institute, the staff included (among others) Oscar Riddle, a former Hoosier and friend of Scott and Payne, who studied the evolution and genetics of pigeons; Blakeslee who studied the genetics of Jimson weed commonly called "stink weed", and Barbara McClintock who did much pioneering work important in developing hybrid corn.

Other summer courses in addition to Fresh Water and Marine Zoology were taught at the Biological Station. Professor Allen from Yale and later George Corner from Rochester taught Endocrinology. An elderly chap from Grinnell College taught during 1931 and 1932 a botanical course that concentrated on mosses. Later Stanley Cain, also a Hoosier and a member of the faculty at the University of Tennessee (then for many years at the University of Michigan before going to the Santa Cruz Campus of U.C.), taught Plant Ecology. All of these individuals had international reputations; informal meetings and discussions with them opened many vistas.

Friese, the radiation expert, acquired as a colleague Howard (Bim) Curtis from Yale where he had just received his Ph.D. in Physics. After several years at Cold Spring Harbor

Spieth: Bim joined the medical faculty at Columbia University's College of Physicians and Surgeons. When World War II came along, he was put in charge of the biological section of the Oak Ridge atomic bomb project. After the war he returned to Columbia and lived in Tenafly where our families could continue their friendship. Later he joined and headed the Brookhaven Laboratory on Long Island.

We made two lasting friendships at Cold Spring Harbor that have been important in our private lives. One was Jane Davenport Harris who later (after Reginald Harris' death) married Dr. James DeTomas. Jane is a sculptor, a marvelous cook and hostess who often entertained in her studio near the laboratory. Through her we had many interesting times with many scientists and artists, including her good friends Sandy and Louisa Calder.

The other is Annette Bacon, daughter of Charles Bacon who, immediately after World War I, went to France to study the production of rayon. Upon returning to this country he was put in charge of the DuPont rayon unit. Annie graduated from Wellesley with a major in biology but she also had considerable training in mathematics and statistics. At Cold Spring Harbor she was serving as a research assistant to a chap by the name of Laughlin. He had grants from a number of race horse breeders and was studying the genetics of race horses. This was the period when Man O'War was the great horse, and it was Laughlin's opinion that Man O'War was the greatest race horse that had ever lived up to that time.

Eventually through my friendship with Lutz, Annie became the secretary of the Department of Entomology at the American Museum of Natural History. Later she left the Museum because of health difficulties engendered by paradichlorobenzene which permeates any collection of insects. She joined the staff at California Institute of Technology and has just retired after twenty-five years there. Among other things she became invaluable as an expert on fund drives for universities.

So we have known her almost half a century, and she is our son's godmother. Before his birth, she said if we had a daughter she would be Aunt Annie. If we had a son she would be Uncle Annie. Of course, to our family, she is Uncle Annie. The other day one of our four granddaughters (all of whom are growing taller and taller) remarked that soon Uncle Annie will be the "runt" in the family, for she is a tiny person less than five feet tall.

Spieth: Visitors also spent time at the Laboratory. Several were of unique interest. Professor and Mrs. Walters of Brown University came one summer and we found them to be a Victorian couple just as competent and stimulating as mutual friends had told us they were. Walters was a geneticist who had published the first American textbook of genetics.

An intriguing English limnologist by the name of Beauchamp (pronounced "Beecham") visited the Station one summer and after the session was over he spent a week or two with us in the city. During that period (1937) the American Legion was in session for its annual convention, and the Legionnaires were up to their usual high jinks -- for which they were famous. That year, among other activities, they took a live horse up in an elevator to the top of the Waldorf-Astoria. Flagpole Kelley was in town seeking a new record for standing on top of a flagpole. Tobacco Road had opened in one of the Times Square theaters and we went to see it. The three of us visited Times Square several times so that Beauchamp (and we) could see the fantastic sights and goings on. Beauchamp was utterly amazed and intrigued by what he saw and heard, especially the language and plot of Tobacco Road and the behavior of the Legionnaires. He commented that in England conventions of veterans occurred frequently but such gatherings always took the form of solemn memorial services for lost members.

That same summer Calvin Bridges, one of the famous trio of Bridges-Muller-Sturtevant who had been students and later colleagues of T.H. Morgan, was working at Carnegie Institute. At the same time Theodore Dreiser was living in the dormitory called the Fire House (it really had once been the fire house in the village across the harbor). He was preparing to write The Genius, basing the central character on Bridges, so he spent his days talking with Bridges and observing the latter's research efforts.

The faculty and their wives typically gathered each day after classes were over and before dinner at the mess hall to have drinks and much animated conversation. We talked of many things, usually about politics or biology. Evelyn (and some of the other wives) had recently been reading the new play Tobacco Road. One evening she turned to Dreiser and asked him if in his experience he had known such people as were characterized in the play. Dreiser, who seldom laughed, began to chortle, stood up, and replied: "Hell yes; some of my goddam relatives are exact replicas".

Spieth: Probably the most appealing and tragic visitor was an Estonian professor of Plant Ecology by the name of Lippmaa. Stanley Cain had organized a symposium on plant ecology to be held after the summer courses were finished, and he invited Lippmaa to come to America to present a paper and take part in the discussions.

After we had returned to New York City that fall of 1938, Lippmaa came to visit with us for several days, which enabled us to learn still more about this warm, thoughtful human being. As a young man during World War I, he had been drafted into the Russian army. When Russia surrendered to Germany and chaos set in, he was in Central Russia and found it impossible to travel westward to his home in Riga. He therefore started walking eastward and after many months reached Vladivostok. From there he crossed the Pacific and then the Atlantic Oceans, and finally reached Estonia.

Lippmaa wished to take back presents for his wife and children in the fall of 1938 when he was with us. He and Evelyn spent a day visiting New York stores, especially Woolworth's big store on Fifth Avenue. Between them they managed to find a variety of items that he thought suitable and knew to not be available in Estonia. Indeed, he was like a small boy seeing a toy store for the first time.

On the evening of the September day when the infamous Chamberlain-Hitler pact on Czechoslovakia was signed, the Spieths took Lippmaa to a dinner party at the home of the director of the Bronx Botanical Gardens. We all listened intently to the radio with its amazing news of the pact that was to bring "peace in our time". The Americans present were all relieved that war had been averted. Lippmaa, however, was silent. Later in the evening when we had returned home, he quietly said, with tears in his brown eyes, "What happened today means the end of all the small countries of Europe, including mine". How right he was!

We bade him goodbye with heavy hearts. Until Germany attacked and started World War II, we were able to exchange letters now and then. After the end of the war, I learned that Lippmaa had been killed while serving as an air raid warden. And, of course, his country was back under the power of the Russians.

Research on Mayflies

Brienes: Let's go back to your own research. You were still working on Mayflies at this time. Since I am not scientifically trained, I do not know how to ask the questions -- and would be the first to admit it -- but what exactly were you interested in? What kind of research?

Spieth: My interest in Mayflies was quite simple. I was interested in their biology, primarily in their evolution and classification, commonly called systematics. Now Mayflies are a rather extraordinary group of insects. They are the most primitive insects that can fly. There are some other groups that practically everyone knows about and which are even more primitive -- such as the silver fish which lack wings and some other groups that the average person normally never sees, such as the Collembola. These are very small, hopping insects, famous for the fact that they are responsible for what is called "red snow". One species of Collembola sometimes accumulates in great numbers on the surface of snow, and they are red in color.

The Mayfly is closely related to the silver fish that you see around your home, and is structurally similar except that the silver fish lack wings. Also the Mayfly spends most of its life-time in the water. Females lay their eggs in or on the water; the eggs hatch out and the young Mayfly, known as a nymph, spends a period of time growing up in water. A few species mature in several weeks, but most species need a year. The mature nymph swims to the surface of the water and the adult breaks out of the skeleton of the nymph and flies away. This adult normally lives twenty-four to forty-eight hours, although a few of them live only three or four hours. Hence the generic name of Ephemeroptera, for the adults are truly ephemeral.

The adult insect emerges fully mature and highly specialized for flight. The digestive system is completely empty at the time of emergence. The fly swallows air until the gut is fully "blown up" and acts like a semi-balloon. Males in the evening or early morning assemble in groups flying above the ground in what we call courtship displays or courtship dances, and the females come flying into these swarms. The female is grasped by the male, copulation occurs in the air, and then the female flies back to the water where she lays her eggs and then dies. The poor male dies too -- satisfied.

So this is the group in which I was interested. The Mayflies are world-wide, very ancient, and found on all of the continents.

Spieth: They live in both streams and lakes -- usually different species in the two different areas.

Their classification and biology were not well known when I started working on the beasts. At that time there were only two people really interested in them in this country, myself and a senior scientist at Cornell by the name of Needham. One of his students, a Miss Jay Traver, later became the leading American Mayfly scholar for a period of time and in turn one of her students, George Edmunds of the University of Utah, had become today perhaps the leading Mayfly specialist in the world. There is much more interest in Mayflies today than was true when I was a student.

As a graduate student I collected Mayflies whenever possible and through the help of E.B. Williamson, of whom I spoke in an earlier Chapter. As I have said before, in the summer of 1929 Williamson and I went with two other men to the Ozarks to collect and in the summer of 1930 I joined with Francis Byers of the University of Florida to collect in the southeastern part of the United States; in connection with my earlier limnological work in northern Indiana I had been able to collect Mayflies. By the time I went to New York I had built up a fairly good collection of Mayflies from the central parts of the country. After going to New York, I immediately began to collect there and other places. I might add that, of course, the College gave me no support for this so that all of the expenses for collecting came from my own pocket, including a rather extensive trip of eight weeks in 1936 into the Rockies and Canada.

Brienes: How about support from the Museum of Natural History?

Spieth: I had no financial support from the Museum. I merely was given space there, you see, and I prized it. The City College system did provide me with a binocular microscope and a number of vials and glassware.

Brienes: You got some hardware from them?

Spieth: Yes, I got some hardware from them. Other than that, everything was paid for by myself. I might add that when it was necessary for carrying equipment on trips with my Field Zoology class, I used my own car at my own expense.

Brienes: Was it a financial hardship for you at that time?

Spieth: Yes, it was, but I never thought about it as a financial hardship. It was a necessity as far as I was concerned so it is like saying food is a financial hardship [laughter].

Brienes: You didn't feel it was discretionary spending?

Spieth: No, not at all [laughter].

Brienes: It was one of those fixed expenses.

Spieth: Fixed expenses, right. I continued to do this but as the years went by two things occurred which bothered me. One was that the population of America was growing and the effect of an industrial society became apparent on the fresh water lakes and streams of the country. Thus collecting Mayflies became increasingly difficult. Secondly, collecting was always difficult so far as adult Mayflies were concerned because they lived only for a day or two and usually each species had a particular time during the year when it emerged from the water. The individuals of any given species did not emerge continuously. To get adults of all the species in a given area, one had to go back to that area repeatedly from early spring to late fall. Parenthetically, none of the species emerged during the winter time.

All of these things concerned me. Furthermore I had worked out my own ideas in the group -- let's say my own ideas about the evolution of the group and the systematics of a number of American species.

One of my major interests was working out the relationships between the various genera. In fact, I can say without egotism that my doctoral thesis, which was on "The Phylogeny of Some Mayfly Genera", became the standard accepted classification for the group. Needham never accepted it; he didn't believe in it. But his students eventually did and certainly Edmunds does. With the further study done in New York and at the British Museum of Natural History, I had worked out most of my ideas on the Mayflies.

My good friend and next door neighbor, Bill Ball, was a vice-president of Calamus of America, and he often entertained

Spieth: Research on Drosophila

Spieth: The difficulty of collecting and the fact that I had accomplished what I wanted to do with the Mayflies were the two factors that resulted eventually in my casting about for another group with which to work. And I investigated several.

Brienes: Finally I found what I wanted when Mayr and Dobzhansky suggested that no one had really worked on the courtship behavior of Drosophila. They themselves had done a little and it had intrigued them; they thought that there were important findings to be made. Both of them were busy with other areas of study, and their interests and backgrounds were such that they would not be readily able to do this type of investigation. Upon their urging, particularly on the part of Mayr, when I returned after my stint in the Air Corps during World War II, I turned to the study of Drosophila.

Brienes: Now the Drosophila work was different because now I had to work with living material. This meant taking care of live stocks and my limited time of three days a week at the Museum did not suffice.

Brienes: You were raising your own colonies?

Spieth: Yes. I received my first specimens of a species from Dobzhansky who had colonies of these flies (stocks, we call them) in his laboratories at Columbia University. Then it was up to me to care for them and study them.

Spieth: By then we were living in Tenafly, New Jersey, and we had a full basement under our house. I realized that the temperatures there were just right for maintaining Drosophila stocks. So I built shelves from lumber that had been used to box up and ship home our belongings at the end of World War II; I had saved the lumber which now made sturdy shelving. I found a disreputable table [laughter] which served as a desk, and we had an old refrigerator in the basement which came in handy to store foods for rearing Drosophila. I made the food for them in our kitchen upstairs and washed glassware and other items in the laundry sink in the basement. In fact, I did this until I came to California several years later. So all of my early work on Drosophila was done in my own home -- which was pleasant, for I could work there in the evenings until midnight or later and on weekends, both to keep my stocks going and to study them.

My good friend and next door neighbor, Bill Bell, was a vice-president of Celanese of America, and he often entertained

Spieth: his colleagues or clients at his Tenaflly home. He claimed that one of his prized treats for guests was to bring them across our back yard and down the areaway into our basement to gather around my microscope to watch "this odd character do a Caesarian operation on a miniscule creature with jeweler's instruments". It was Bill who gave the lecture, not I. [laughter]

Brienes: In looking through your published work on Drosophila and Mayflies, it seems to me that you have concentrated on mating behavior more than on anything else.

Spieth: Well, interestingly enough I had worked on the mating behavior in Mayflies too, simply because it was one of the things one could observe in the field in the evenings when out collecting flies. Of course, Mayr and Dobzhansky both knew that I had observed and studied Mayfly courtships.

Brienes: When they put you onto Drosophila, was it the understanding that you would continue the same kind of observations?

Spieth: Oh yes, it was understood that I would be working on courtship behavior.

Brienes: And is it true to say that your main career with Drosophila has been with mating behavior?

Spieth: Oh yes.

Brienes: Were there other things that you studied about Drosophila?

Spieth: I have also studied the biology of Drosophila in their natural habitats, but I have not done work, for example, in genetics or cytology. My interests have been on mating behavior and how it relates to the biology of the insects and how it is involved in their evolution. In a sense, I just changed organisms.

Brienes: If someone wanted to know about the mating behavior of Drosophila, the best place to go would be to your own work?

Spieth: There are other investigators who have also studied drosophiloid behavior. If, however, you want to learn about the comparative mating behavior of various species, I think my research represents the bulk of work that has been done. If you want to analyze or to understand the stimuli that pass between the males and females during their complicated behaviors, then there are other workers in the field who have done more than I have -- particularly Manning and his students in England,

Spieth: Petit in France and Spiess and Ehrman in this country. Spiess, for instance, is thoroughly familiar with the problem of mating speed (why some individuals mate faster than do others) and with the genetics of mating speed. I haven't done anything of this sort.

Brienes: Now I have read a number of your articles and some other work on mating behavior. I found it fascinating to read about, and I am just wondering if you could in your memoir give some description of what the mating behavior of the Drosophila would be like, in a foreshortened way perhaps, but just to include some of it?

Spieth: There are many species of Drosophila in the world, perhaps two thousand. These various species show great differentiation in size, coloration, and naturally in the mating aspect of their behavior. Typically, the Drosophila is a creature which lays its eggs into fermenting material, fermenting fruits and other substances. The eggs hatch into little maggots which eventually develop into flies. The adult flies feed twice a day, normally in the early morning or late afternoon. They also feed upon fermenting substances; some use fermenting (that is rotting) mushrooms. Both sexes of the adults come to mating sites which are usually small in physical size, such as a rotting apple, orange, or mushroom -- or to a rotting, dripping portion of a tree called a slime flux.

The females feed industriously, because they not only have to have food for their own maintenance but also they are developing eggs with a lot of yolk in them, which takes a lot of energy to produce. They may produce hundreds of eggs, you see, so they must have a large intake of food. And they have very short periods in the evening and in the morning to do this. Like the Mayflies, they hide during most of the day.

Now the males, on the other hand, do not have to spend a lot of energy producing sperm. Sperm do not take very much energy to produce. So the males feed for a much shorter period of time; as soon as they have finished feeding, courtship and sex become their prime targets. They go from individual to individual, attempting to see if they can induce a female to engage in courthship and perhaps mate. A male Drosophila, except for one or two unusual species, cannot identify the sex of the individual that it approaches. In fact, many cannot even separate two closely related species that are eating on the same fermenting food mass. The only way they can manage this is by going up to the other individual and striking it with their forelegs or forefeet. They have on

Spieth: their forefeet sense receptors which enable them by striking to determine whether the individual is a male or female and whether it belongs to the same species as they do; some species can also tell if a female has been inseminated, in which case they immediately leave her. In any instance, the striking movement of the forelegs, which I call "tapping", tells the male something about the individual he has approached. The female also can determine whether the male that has tapped her is a member of her own species or of another one.

If the two individuals are of the same species, the male then will proceed to court. The courtship is typically complex, involving the use of wings, mouthparts, legs, and so on. In other words, the male provides a variety of stimuli or inducements to the female. She, for her part, may decide that she does not like this particular male even though the stimuli are correct or are essentially correct, and so she has mechanisms for announcing to him: "Leave me alone; I'm busy". If she has been previously inseminated, she usually makes her announcement rather forcefully and effectively. If, however, she has not been inseminated and is receptive to this particular male, she may copulate with him. In other words, the female decides when copulation will occur so that rape is unknown. Although males of some species do continue courtship with non-receptive females, they invariably are unsuccessful.

Brienes: [Laughter]

Spieth: If, however, she does accept the male, then copulation occurs and it is the male that determines the end of copulation, and the female cannot rid herself of the male until he is ready to cease activities. Copulation usually lasts for a few minutes but may be for a longer period in some species. Both individuals then go about their own business; the female, of course, sooner or later lays eggs.

You see, this is natural selection in action -- actually sexual selection which is a particular kind of natural selection because the female decides whether she is going to accept a male or not on the basis of his overtures.

Brienes: Did you discover some rhyme or reason as to why females would reject members of their own species?

Spieth: It is obvious that it occurs in the field and there have been people who have worked on this problem. We know, for example, that mutant males are usually less successful than non-mutant males. Unquestionably, a male that is too small or too large

Spieth: may have difficulties, but basically rejections are based upon the stimuli the female receives.

Just in observing them, one cannot ascertain the differences between the successful and non-successful stimuli provided by a male. It takes quite elegant experimental techniques to determine this. We know, for instance, as a result of work done by some of the English investigators and also by some American observers, that each male sings his own peculiar song to the female. The female can obviously hear the song. Mutants may have a song different from that of the normal male and these individuals are discriminated against by a normal female.

We know also that there is variation in the songs of individuals in the same population, just as singing by individual humans can vary. If one's dependence upon being able to produce offspring is based upon his singing ability, then the male had better have the correct song well in hand.

One male can inseminate many females, but any one female is inseminated not more than once or twice in her lifetime. A successful male will usually leave a great many offspring, whereas a non-successful male or a marginally successful one will leave only a few offspring for the next generation. Selection clearly operates in courtship.

Brienes: I was fascinated by one experiment that you did in which I guess you proved that love was in the heart rather than in the head when you decapitated some Drosophila to see what would happen.

Spieth: It happens that you can decapitate the females and they then can live for several days but do not try to flee from the males. They stand upright, but they tend to remain stationary. If a male comes in contact with such a female, he will court her. Some males cannot tell the front end of a decapitated female from the back end, and they will court the front instead of the back. The latter approach is, of course, normal.

I mentioned earlier that rape is impossible, but occasionally it can occur with these decapitated females. The point of this technique is that it enables one to study the complicated courtship of a male with greater ease because the female simply stands there while the male repeatedly goes through his whole repertoire. The repertoire may consist of a whole series of sequential actions with various parts of the body of the male and female involved in it.

Spieth: I remember distinctly when one of the most common and famous species, Drosophila melanogaster, surprised me. A number of us had worked on the courtship behavior of this fly and I thought I knew the male behavior from A to Z. But when I used decapitated females, I saw a particularly unique male courtship motion that I had never observed before. Subsequent to that experience, of course, I could see it with normal flies -- but it's like other things: you have to learn to see when you are doing this sort of study.

Brienes: One last question about the actual technique of watching these flies. Did you have them in a kind of jar?

Spieth: No.

Brienes: How do you watch them?

Spieth: We put them in a very small cell that can be placed under what we call a stereoscopic microscope which is a low powered instrument that has magnification from six to fifty times. Such a little cell is made out of a piece of plastic or plastic tubing with glass on top and bottom. This is then placed under the microscope and one sits and watches. The flies are so small one cannot accurately see their movements without magnification.

As I observe the movements of the flies, I can orally record my observations on a tape recorder. One can also have a metronome that makes a clicking sound operating at the same time so that the sound of the metronome is recorded along with the voice. Later, by listening to the tape, I can study the sequences of the courtship movements and correlate them to the clicking of the metronome and thus analyze the duration and frequency of activities during a period of time.

Unfortunately this method, while helpful for movements, does not tell anything about odors, which we call pheromones, that the male may produce. Neither does it tell one about the males' songs which can be recorded only by super-sensitive microphones.

Brienes: Well, that was interesting. [laughter]

### Saying Goodbye

Brienes: We have talked about your years in New York as a teacher and investigator and we are now ready to go west to continue your life story. What were your feelings about leaving the East?

Spieth: No such decision can be made without some deep regrets. I have already said that I counted CCNY a great institution. We had truly enjoyed our life in New York and in the East, especially the vast offerings in all the arts and respect for learning.

Brienes: Indeed, we were convinced that when we had reached retirement age, we would return to live on Central Park West next door to the American Museum of Natural History where I could spend full time on research and we could enjoy our good friends in the area and the rich offerings of the city. Perhaps even more than any other one thing, I knew I would find it difficult to do without the magnificent libraries, especially those at the Museum and at Columbia University.

Spieth: Campus was not the problem. I knew the campus and the status of a general campus did the little change to my cellar. That was in 1939.

Brienes: What I would like first to deal with in your association with the Riverside campus of the University is the first period when you were head of the Life Sciences Division. I would like to get a general picture of the growth of the Riverside campus -- not simply your own experience, but a general picture: how a campus grows; what is the basis for a university campus, and what's of particular interest in the period when you were there which was a period with all the problems of a beginning and growing campus -- and all of the conflicts that are associated with this early stage. Let's start first by finding out how, while you were at CCNY, the first became associated with the University of California and how it happened that you were recruited to come west.

Spieth: All right. Dr. A.L. Walander who was chairman of the Department of Biology at CCNY retired to Riverside, California, in the Forties. When the Regents decided to establish a liberal arts campus at Riverside, he informed us about their development and asked if I would be interested in being considered perhaps for a position. Gordon Watkins had been named President of the campus and it was his responsibility to (1) develop the organization of a College of Letters and Science and (2) recruit the original faculty and administrators for such a College.

#### IV - THE GOLDEN WEST

##### Riverside

- Brienes: In joining The University of California at Riverside, there were two separate eras in your career there. The first was when you were head of the Division of Life Sciences. That was from 1953 to 1956. The second was from 1956 to 1964 when you were the chancellor of the campus.
- Spieth: During the period between 1956-1958 the title of the chief campus officer was "provost". Only when the campus reached the status of a general campus did the title change to chancellor. That was in 1959.
- Brienes: What I would like first to deal with in your association with the Riverside campus of the University is the first period when you were head of the Life Sciences Division. I would like to get a general picture of the growth of the Riverside campus -- not simply your own experience, but a general picture: how a campus grows; what is the basis for a university campus, and what's of particular interest in the period when you were there which was a seminal period with all the problems of a beginning and growing campus -- and all of the conflicts that are associated with this early stage. Let's start first by finding out how, while you were at CCNY, you first became associated with the University of California and how it happened that you were recruited to come west.
- Spieth: All right. Dr. A.L. Melander who was chairman of the Department of Biology at CCNY retired to Riverside, California, in the forties. When the Regents decided to establish a Liberal Arts campus at Riverside, he informed me about this development and asked if I would be interested in being considered perhaps for a position. Gordon Watkins had been named Provost of the campus and it was his responsibility to (1) develop the organization of a College of Letters and Science and (2) recruit the original faculty and administrators for such a College.

Spieth: Of course there had been a campus at Riverside since 1907 but it was limited to the Citrus Experiment Station, which was world famous for its research on citrus and other sub-tropical crops. I knew about the Station. In fact, I knew a number of men either directly or indirectly who were scholars at the Station. In 1944 when I was in the Air Corps, I had visited the campus when Paul Long and I had flown west, he acting as pilot and I as navigator. He let me off at March Air Base outside of Riverside and I spent a few days with the Melanders, when I had an opportunity to visit the Experiment Station. In addition to research there was a limited amount of graduate teaching on the campus at that time.

Brienes: Graduate students would come from other campuses, wouldn't they?

Spieth: Although the Station did not give a degree, the student could do his research for a graduate degree at Riverside, but the degree would be granted by one of the other University campuses which had a Graduate School. This was taken into consideration by those working on the Strayer Report.

Brienes: Do you know what led up to the formation of the Strayer Committee? How did it come about?

Spieth: It is my understanding that it came about because there arose a number of problems in higher education after World War II. The Regents and the State College Trustees, after consultation with each other, formed a liaison committee, which in turn appointed the Strayer Committee to make a survey of the needs of higher education in California. The Strayer Report appeared in 1948. One part of its recommendations was that there should be established a four year college in the Riverside-San Bernardino area. Eventually it was decided that the campus should be located in Riverside on the site of the Citrus Experiment Station.

Brienes: I know that when the Strayer Committee was holding hearings, there was some lobbying going on to decide where the campus would be placed and there was some competition between areas. Do you know anything about that story?

Spieth: I know very little about it except for the fact that there was strong legislative support for choosing Riverside. This was, I believe, mostly due to the efforts of Assemblyman Philip Boyd (who was later to become a Regent of the University) and Senator Nelson Dilworth. I have heard there was a good deal of tugging and pulling, but both Dilworth and Boyd were effective advocates.

Dilworth had real influence in the state government, especially in the area of education. He was an extraordinary person --

Spieth: tall, robust with an athletic build, and with the nickname of Pistol Pete which he had acquired in his younger years. Conservative in outlook, he had a deep and abiding interest in education. He was incorruptible and during the many years that he served in the State legislature he adamantly refused to attend any events sponsored by the ever present lobbyists.

Boyd was likewise interested in educational matters and felt that Riverside was the logical place for expanded opportunities in higher education to be made available in southern California. It has been my impression that Boyd and Dilworth, with help from the citizenry of Riverside and the surrounding area, were largely responsible for the placement of the college at Riverside.

Brienes: I know that the civic leaders, Boyd among them, had formed a committee in Riverside.

Spieth: They formed the Citizens University Committee.

Brienes: And that committee functioned for years.

Spieth: It is still functioning -- and it has been an important and extremely helpful organization.

Brienes: Do you remember what was Riverside's biggest competition for the campus? San Bernardino, I know, was mentioned.

Spieth: San Bernardino was mentioned and I think also perhaps the San Fernando Valley, but I frankly do not have accurate information because this all occurred several years before I was even cognizant that such considerations were occurring.

It was in 1948 that Dr. Watkins was appointed Provost of the still to be constructed Riverside campus. He had been born in Wales, the son of a coal miner. At sixteen he had migrated to the United States. Intellectually competent, very energetic, he had worked his way through college at the University of Montana, and then entered upon graduate studies, specializing in labor economics. He received his M.A. from the University of Illinois and the Ph.D. from the University of Pennsylvania. Most of his life as an academician was spent at UCLA where he was a Professor of Economics and for a number of years served as Dean of the College of Letters and Science as well as Director of the Summer Session. After his appointment to the Riverside campus, matters were slowed down when the Korean War erupted, and construction materials were not available for new buildings. As a matter of fact, if it had not been for Henry Kaiser, construction would have been delayed even longer. By the time the

Spieth: war had ended Watkins was in residence in Riverside and was able to convince Kaiser that he should provide the structural steel that was absolutely necessary.

The Korean War interfered in another way, for Provost Watkins was called to Washington for service with the Federal Government on labor relations. It was not until 1952 that he was able to pay full attention to the preliminary work, quite a sizeable job, necessary before the campus could be opened. It was not until February of 1954 that the first students were admitted.

Of course, his task was not only to see that the buildings were built but also to get the basic administrative groups, both in the faculty and also in the non-academic areas. For example, the first man that he brought to the campus was Edwin Coman, the librarian, and simultaneously or almost simultaneously he brought Charles O'Neill there as the assistant business manager. Then he proceeded to fill other positions, especially in the academic areas. He had a committee to help him, drawn from other campuses, but I do not know the full membership of that committee. I do know that a chemist from UCLA by the name of Francis Blacet was on it.

On the basis of his consultation with the committee members, Robert A. Nisbet, a sociologist from the Berkeley campus, agreed to become Dean of the College. Nisbet had an excellent reputation as a scholar and as a young faculty member who had been constructively involved in the famous Oath controversy.

From UCLA John Olmsted, a historian, was chosen to be head of the Division of Humanities. Olmsted had been a Rhodes Scholar and was deeply committed to teaching and the areas of scholarship within the Humanities.

Conway Pierce, a physical chemist who had received his degree from the University of Chicago under the direction of Albert Noyes, Jr., was at that time head of the Department of Chemistry at Pomona College. Pierce was not only an excellent research chemist and teacher but also a capable administrator. At the urging of friends in the University of California, Pierce was persuaded to join the new faculty at Riverside.

Jack Hewitt, the swimming coach at Berkeley, was chosen to be head of the Department of Physical Education.

These individuals were all in California and, except for Pierce, Watkins had known them personally as faculty members on one of the other campuses of the University. They were appointed during the early part of 1952.

Spieth: In July of 1952 I received a letter from Watkins, asking if I might be interested in coming to the Riverside campus. It seems that my old boss, Melander, had gone for a second time to call on the new Provost and had again suggested my name for the post in Life Sciences. After the due process of checking references, Watkins wrote inviting Evelyn and me to have lunch with him about the first of November at the Roosevelt Hotel in New York. And we did.

During our conversations, he explained something of the plans for building a College of Letters and Science from scratch under the aegis of the University of California. At that period in the history of higher education, this was a brash, brave undertaking, but Watkins had the gift of persuasiveness. Toward the end of our lengthy conversation, when questions and answers had flown fast, he turned to Evelyn and, with a twinkle in his eyes, asked: "Mrs. Spieth, are you wedded to New York?" She twinkled back, saying that she had heard there were other interesting places in the world. He said very gravely: "Yes, I know New York has many fascinations, but -- Riverside is more romantic."

Shortly after he had returned to Riverside, I received an invitation to accept the appointment as chairman of the new Life Sciences Division on the Riverside campus, and he urgently asked that I should be there by the first of January.

When I talked with my colleagues at the College, I uniformly was met with arguments that it was a dangerous business to go to a place that was mostly plans on paper. A persuasive argument was that I simply could not afford to give up twenty-one years of credit toward retirement for there was no reciprocity between New York and California on that score. I was told that I would be a fool to give up the pension provided for retirees at CCNY, at that time the best in the country. It was just something that "nobody did". But we were tempted by the opportunity to be a part of an exciting educational development, and accepted the invitation.

We put our house up for sale the day before Thanksgiving -- and it was sold the day after Thanksgiving. Somehow we wound up our affairs personal and professional. Because the move was considered so drastic, the Dean of the College insisted on not accepting my letter of resignation, but gave me a year's leave of absence, confident that after a year in the wild, woolly southern California, I would want to return to "civilization".

Spieth: My appointment to UCR was not officially confirmed until late in December (1952) and for a time I thought I was going to have to tell Watkins that I couldn't come if he wanted me by the first of January.

I had to resign my position at CCNY, resign from teaching the graduate course at Columbia University, and close down my research activities. Also -- the Biology Department had to find somebody to replace me.

I might add that I disposed of my large Mayfly collection by giving it to the American Museum of Natural History.

Since I did not know the governance procedures of the University of California and had never been in contact with the Academic Senate there, I did not realize that such matters proceed rather slowly. I wrote to Watkins, saying if they could not make a decision rather soon (this was early in December) I would have to ask to be relieved of my commitment. Well, he got the appointment through and fast, but I must say that when I got to Riverside I heard from the Academic Senate members about the pressure I had placed on the Academic Senate [laughter].

Brienes: May I stop you for a second? Did you not say that Dr. A.L. Melander had originally recommended you to Watkins?

Spieth: Melander had given my name to Watkins -- and in fact he did this when the College of Letters and Science was first authorized. As a result Watkins had written me before the Korean War started. I had heard nothing more from that date because Watkins then went off to Washington and everything in Riverside was suspended for a period, so I had just dropped the matter from my mind.

Brienes: I see. And had Melander communicated to you the fact that he was talking to Watkins? Did you know about this?

Spieth: Yes, yes; he communicated with me about this. He asked for my permission.

Brienes: So your interest went back to '49 or '48?

Spieth: Forty-eight -- as soon as Watkins was appointed Provost for Riverside. Thus my name was on Watkins' list for a long time. I am sure that he had received recommendations from faculty on the other campuses of the University of California. Either these candidates did not suit him or else they did not want to accept the position.

Brienes: Do you think a fear of inbreeding in the University was a factor in reaching outside?

Spieth: I do not know. It might have been, but it was not an easy position to fill. It was clear by the very organization of the College and its aims as espoused by both Sproul and Watkins, but particularly by Watkins, that UCR was to be an institution of small size, solely devoted to undergraduate instruction. Such a campus would not have attracted many individuals, especially mature faculty with outstanding research records. The only reason that I was interested was that I do enjoy both teaching and research, and I was finding my life in New York very strenuous. I was commuting daily from Tenafly to CCNY, but I had no research facilities there. For years I had traveled to the American Museum of Natural History to accomplish research activities; then later I went to the sub-standard conditions of our basement.

The College of the City of New York during my time there was in my opinion the greatest undergraduate institution in the United States. Its drawback was that it provided no support for research, and I was determined to continue my investigations. I had been there for twenty-one years. I enjoyed the institution and I thoroughly enjoyed the students, but I had a heavy teaching load, made even heavier by the graduate course I taught at Columbia University. It was a strenuous life.

I usually left home at seven in the morning and returned about seven to eight o'clock in the evening, had dinner and then prepared for the next day's classes before going to the basement laboratory to play with my research.

I decided that a change in location would be stimulating and particularly at an institution such as the University of California and at Riverside where I knew some of the men at the Citrus Experiment Station and had appreciation for and interest in the sort of investigations they were engaged in pursuing.

Brienes: -- Because of the Experiment Station?

Spieth: Yes. Many of the problems being investigated there were the sort of things that intrigued me a great deal. So I thought that if offered the position in the new College I would accept even if it were as an administrative chairman. At CCNY I had rigidly refused to accept administrative duties, but I was assured that at Riverside the chairman would not have to serve permanently and that there would be rotation of chairmanships.

Spieth: I estimated that after getting the Division started, I could eventually be relieved of administrative duties and could get back to research and teaching which were certainly my first loves.

Brienes: But your understanding was that your research career would be curtailed at least at the beginning?

Spieth: I knew it would be curtailed; I was not told it would be. But that was obvious because if I were to be responsible for acquiring a faculty and developing a curriculum for the whole of Life Sciences it would surely take a year or two out of my life. I had anticipated this, but on the other hand I knew that there were many interesting native Drosophila in the Southwest and that there were many problems which I could hope to attack as soon as I had completed my administrative stint. When I had taken a sabbatical at the University of Texas in '49-'50, Evelyn, Philip and I had taken a field collecting trip to the South West which included Riverside. I knew what some of the Drosophila fauna were in the area and I knew there were abundant problems there to work on and exactly the approach and methods that I would pursue. Since I had established close relationships with the University of Texas, I could also easily go back there periodically. All in all, it presented an intriguing possibility all the way round.

Brienes: Had CCNY gotten a replacement for you before you departed?

Spieth: Yes, they had. I had been able to tell them in time for them to do some shifting of personnel.

Brienes: Now, had you done any work on this new job before you moved west? Had you done any of the recruitment?

Spieth: My goodness, there had been no time.

Brienes: Did you know what was waiting for you out in Riverside?

Spieth: I had seen the Table of Organization, and I knew that the Life Sciences would have a faculty of six people, which would be a small faculty at the start -- but I was assured that as enrollments grew it would be possible to get additional personnel. I knew that there would be four divisions.

Brienes: I want to pick up something before we continue with your job at Riverside. I would like to pick up the conception of the College of Letters and Science that Watkins and apparently Sproul had right at the beginning of its founding. Why was it to be an Amherst of the West, as they spoke of it? And whose idea was it?

Spieth: I cannot fully explain that. I still do not know. As I read the reports, histories, and other documents that have been available to me, I get conflicting points of view. The Strayer Report indicated that the University should decrease its emphasis on lower division work and emphasize graduate studies and professional studies. But the record, at least verbally, also shows that President Sproul wished to have a small college at Riverside. And certainly Provost Watkins was or had become fully, utterly, and completely dedicated to this point of view. He wanted a small college comparable to Swarthmore, Amherst, perhaps Oberlin -- a college modeled after small private eastern liberal arts institutions, of high quality and with emphasis on undergraduate teaching. He therefore sought faculty who would be sympathetic to this point of view.

The key people acquired for Riverside agreed with Watkins. Unquestionably Olmstead was of exactly the same opinion as Watkins; Nisbet also felt much the same way. Pierce had been at the University of Chicago before he went to Pomona, but he knew from his Pomona experience that it was possible for him to conduct his research under the conditions proposed for the College of Letters and Science at UCR and he also enjoyed teaching, so he was quite agreeable. I felt the same way. But it was Watkins who was the driving force. Watkins possessed great personal charm and was highly articulate in espousing his ideas. Furthermore, he had political know-how. I have never known any individual who could have surpassed him in the effectiveness he displayed in successfully solving the problems involved in the highly complex task of putting together a new institution of higher education.

Brienes: Where did the figure of 1500 student enrollment come from?

Spieth: It sort of arose amorously so far as I could tell. There had to be some figure for planning the buildings and other service units, and the original complement of buildings that were constructed were of such dimensions that they could handle a student body of 1500.

Brienes: Well, let's go pick up your coming to California. When you arrived here in late January of 1953, what was there of a campus? What was standing up on the campus at that time?

Spieth: Of course, the Experiment Station was there [laughter], but the Liberal Arts section of the campus consisted of a large area of barren ground, extremely muddy at that particular time, on which the construction of five buildings was occurring -- but mostly this was still restricted to underground portions.

Brienes: Were you given an office on the campus?

Spieth: On the Letters and Science part of the campus there were no completed buildings. Provost Watkins had his office in the Administration Building of the Experiment Station, but the others of us who were early arrivals were given space in the old Director's House, which had originally been built for the Experiment Station. The Director no longer lived in the house and it had been used for various functions intermittently, as I understand. It had been somewhat modified for the incoming administrators and faculty.

Brienes: Is the house still standing?

Spieth: Oh yes, it is still in existence. It now houses Agricultural Extension.

Brienes: It must be a rather large place.

Spieth: Well, it was a rather sizeable home. The dining and living rooms had been assigned to the librarian, Edwin Coman, and he and his small staff were beginning to accumulate a library. The Registrar, Clinton Gilliam who had transferred from Berkeley, was in the maid's room [laughter]. The four Division heads, when we all arrived, were given rooms on the second floor -- as were the Dean of Students, Tom Broadbent, and the Dean of Women, Loda Mae Davis, both of whom arrived sometime later.

Brienes: Everyone had a bedroom?

Spieth: No, the Division heads were all in one room, the secretaries were in another, and the Dean of Students and the Dean of Women had another room.

Brienes: In other words, all the heads of the Divisions were in one room?

Spieth: One large bedroom.

Brienes: But separate desks?

Spieth: Yes, separate desks.

Brienes: And a common secretarial pool, is that it?

Spieth: No, each of us had or soon acquired a personal secretary.

Brienes: That must have been a very difficult set of circumstances.

Spieth: No, it was not. We became known as the "Hill-Toppers" because the house was built on a small knoll which looked out over the city of Riverside. It was a fine location. Behind the house was a beautiful little garden in which we often ate our lunches and which we also used for conducting interviews with potential faculty members.

Brienes: By living together we came to know each other well. We were able to pick each other's brains and discuss various matters intimately. We were able all through the succeeding years, I think, to solve problems more effectively than we could have done had each of us first been sequestered in a place apart from the others. I think it, perchance, was a superb way to begin the organization of a new institution. I would do it over again if I were the chief administrator for building a new organization.

Brienes: Seems to me a great stroke of luck that you would all get along in one room. Couldn't it have gone the other way?

Spieth: Well, I can at least vouch for the other men in that room. They were all gentlemen. And we were united in a project that was exciting to each of us and a real challenge.

Brienes: What was the first thing you had to do? What was your major activity when you first got there?

Spieth: The first thing to do, of course, was to develop a curriculum -- and then to acquire faculty members.

Brienes: Now, you were the head of -- was it called the Division of Life Sciences?

Spieth: Yes, the Division of Life Sciences.

Brienes: The decision to organize the campus on a divisional basis was made before you came, so you had nothing to do with that?

Spieth: I had nothing to do with that, and I do not know the origin. -- It may have been suggested by the State-wide committee that advised Watkins, or perhaps it was Watkins' original idea.

Brienes: I don't know what the set-up is in small liberal arts colleges elsewhere, but would that have been a pattern in smaller colleges?

Spieth: It can be. It is not necessarily the pattern for small colleges but it is a perfectly feasible pattern. Now Pomona, for example, does not have that kind of pattern. There is nothing

Spieth: detrimental to it that I know of, at least certainly not for the Life Sciences. Actually it was no change for me, because the Biology Department at the College of the City of New York encompassed the same areas that the Life Sciences Division did at Riverside. In Pierce's case it was different because he had Physics, Chemistry, Geology, and Mathematics in his Division.

Brienes: What was encompassed in Life Sciences?

Spieth: Botany, Bacteriology, and Zoology.

Brienes: Now you said that your first job was devising curricula in all these three areas. Were you doing that yourself?

Spieth: Yes, that was my responsibility. There had been a tentative curriculum laid out apparently by the committee that had advised Watkins. I made some changes, but this was not difficult. I had been in the highly effective and well organized Biology Department at CCNY.

Brienes: Was it a matter of designing the courses, the content of courses?

Spieth: It is more or less standard in many institutions, although not in all, to have a General Biology course as a beginning full year course and which is taken by all the students. This is followed by advanced courses such as Comparative Anatomy, Embryology, Entomology, Botany, Bacteriology and whatever is desired for student specialization. Some of these obviously could not really be decided upon until the faculty was acquired. We had slots for faculty members in Zoology, Bacteriology, and Botany. Thus there was some flexibility involved, and it was a question of getting the faculty and then working out the details of a curriculum, especially for advanced courses, tailored to the faculty interests and capacities.

Brienes: How long did it take to devise a curriculum?

Spieth: We had a year to do this. Nisbet, Olmstead and Pierce to a certain extent had been working on their problems before January of 1953. But we arrived physically (that is, the Division heads) all about the same time; the others had come about a month ahead of me. Watkins had not found the head of the Social Sciences Division at that time, but since Nisbet was familiar with that area he took over the development of the Social Sciences curriculum. Arthur Turner was not appointed

Spieth: head of the Social Sciences Division until late in '53 -- the last of the chairmen to be appointed.

Brienes: Was devising curriculum done along with recruitment of faculty, and then the faculty that you brought in were involved in further development of curricula?

Spieth: Oh yes, yes.

Brienes: Let's turn then to how you recruited faculty for Life Sciences.

Spieth: I found a whole pile of applications when I arrived in Riverside. Some of them looked fairly good. I knew people around the country to whom I wrote for names of people they could recommend. I visited several institutions, and senior professors in many institutions sent me names of individuals in addition to those who had already applied.

Brienes: Where did you travel in recruiting faculty? Do you remember how extensive was your search?

Spieth: I went across the country once looking for people. In fact, I went to Mississippi to interview one chap, Victor Goodman, who was appointed as the botanist, and I went to Berkeley, Stanford, and UCLA. Some of the men made longer trips, some shorter. I had the smallest of the Divisions. Only five people were necessary.

Brienes: My problem was that Watkins was an extremely conservative man fiscally. A true Welshman, he was extremely frugal not only personally but also with University monies. In the case of the Life Sciences Division, I was a beginning full professor and had slots for five assistant professors, Step I, to set up an entire biology department.

Spieth: To show you how conservative [laughter] Provost Watkins was: There was an opportunity to bring a man by the name of Irving Newell from Hawaii. He was well known to some of the people at the Citrus Experiment Station, and he had an excellent reputation. Newell's position was such at the University of Hawaii that we simply couldn't expect him to come as a beginning assistant professor, so I made the suggestion that we reduce one assistant professorship to an instructorship and use the money saved to apply in upgrading another assistant professorship to Step II. Now unfortunately the differential was not quite adequate to do this and I was \$15 short. It took me two weeks to convince Provost Watkins that he should dig up those extra \$15 so I could bring Newell from Hawaii [laughter].

- Brienes: Do you mean \$15 on the yearly salary?
- Spieth: Fifteen dollars on the yearly salary!
- Brienes: My goodness! You could have just taken it out of your own pocket.
- Spieth: That would have been administratively difficult.
- Brienes: You would have had to make a gift to the University! Thus, with Newell at Step II Assistant Professor, everyone else was Step I except an individual who was an Instructor Step I?
- Spieth: Yes, the instructor was Timothy Prout who is now on the Davis campus.
- Brienes: I'd like to know how many people you think were in this pool of applicants that you selected from.
- Spieth: Oh, there were something over one hundred.
- Brienes: How many do you think you interviewed? Have you any recollection?
- Spieth: No. Some of them I simply did not interview because that pool of applicants had been developing since 1948 or '49 and some of them -- many of them -- had found positions elsewhere. I think I interviewed maybe a dozen or so people to get the five.
- Brienes: Except for Newell, were all of them young, beginning people in their fields?
- Spieth: Yes.
- Brienes: Let's go through the list very quickly and get some recollections about that first group. There was a woman, Adelaide Brokaw. Where was she from?
- Spieth: She was an Easterner, a Quaker, a delightful, competent woman who had taken her degree at Stanford. She came from an intellectual family and she was a fine addition to the Division -- a microbiologist.
- Brienes: Do you remember how she came to your attention?
- Spieth: I can't remember if she had a letter in the file or whether I got her name from one of the people at UCLA. She had applied to UCLA for a job and had been one of those to whom they had given serious consideration. Apparently they had selected

Spieth: someone else on the basis that Adelaide's research and teaching interests did not quite fit the slot that they had open.

Brienes: Did she stay at Riverside?

Spieth: She came, but eventually she married one of the chemists (Ronald Tolberg) and he did not stay. He went to the Bay Area where he is still working with the Standard Oil Company. Adelaide resigned her position and followed her husband to Berkeley where she acquired a research position on that campus. She eventually had two children and did not want a full-time teaching position. I believe she is still spending time on research at UCB.

Brienes: How long did she stay at Riverside? Do you remember?

Spieth: She stayed three years. I had a difficult time with women. I hired another one the following year, Marian Cramer whom I had known as a graduate student when I was on sabbatical leave at the University of Texas, and I knew she was outstanding. She came and a few years later she married one of the zoologists who at that time was not on our faculty but was working on research problems centered on the Salton Sea, a brackish lake near Palm Springs. She quickly became pregnant and resigned. Thus the Division lost two highly competent faculty members at a critical time in our early development.

Brienes: It almost sounds as if you were arguing against Affirmative Action [laughter].

Spieth: It was not disastrous, but it made it difficult for the Division of Life Sciences; there's no question about that. The campus was developing and setting its mores and standards. The Life Sciences Division was not only the smallest but also had a very junior faculty to start with. Each of the other divisions had some senior faculty in addition to the chairman. When we early lost two members of our faculty, we had to go back and start over again with junior people. So really, our input into the campus development was seriously handicapped.

Brienes: As an administrator, did it leave you in a sense prejudiced against hiring women?

Spieth: No! It did not leave me prejudiced against hiring them, but I later became rather incensed with the American Association of University Women, when we tried to get a chapter on campus, for it said we did not have enough women on the faculty. I recited the story about women in our Division of Life Sciences

Spieth: and said if AAUW felt so strongly about the matter I was afraid AAUW would have to do without our fine coeds. We got a chapter of AAUW!

Brienes: Was it then difficult in the academic field to hold women?

Spieth: It often is more difficult than with men, for a variety of reasons. Their professional half life is often shorter than for men. Some years ago I read a report concerning the medical profession. Male doctors usually average from twenty to twenty-five years in active practice after completing their medical training, whereas women doctors average about five years. Perhaps there have been recent changes in these statistics.

Brienes: I'm sure you were concerned at the beginning to have a stable Division, at least for the formative period. Now Professor Brokaw was a bacteriologist.

Spieth: Yes, that's right.

Brienes: You had Victor Goodman as a botanist. Could you tell me a little about him?

Spieth: Goodman had received his doctorate at Cornell University and then had gone to Mississippi State University. He had an excellent background for UCR. He was broadly trained in Botany; he could teach not only General Botany but also such diverse courses as Plant Physiology and Plant Morphology. I was hard put to find someone who would be able single-handedly to cover the whole field of Botany at the undergraduate level. So I was delighted to find him, and he has been a constructive member of the Division ever since.

All of the individuals whom I brought in that first year have had quite satisfactory careers.

Warren Gross, who completed his doctorate at UCLA, came to us from work there on an atomic energy project. He was a superbly competent physiologist and a valued member of the staff. In October of 1966, he and his charming wife Kay, in celebrating their wedding anniversary, went to a restaurant some distance from Riverside. On their way home they were driving on a narrow back road and were killed by a train when they entered an unguarded railway crossing. The loss of these two was a severe blow to the campus.

Spieth: No, half time.

Spieth: Timothy Prout, whom I mentioned as coming to UCR as an Instructor, had been in a graduate course which I taught at Columbia University where he was a student of the renowned Theodosius Dobzhansky's, and he himself is a geneticist who has had a distinguished career. Currently he is a member of the Davis faculty.

The next year we added to the Life Sciences faculty Marian Carpelan whom I have already mentioned, William Mayhew, Rudolfo Ruibal, and Frank Vasek. All four of these individuals are quite similar in ability, intellectual outlook and competence to those already on the staff. Except for Marian, all of these individuals are still in the Division. Marian Cramer, now Mrs. Carpelan, has returned to the campus to an important roll in air pollution research.

Brienes: With this faculty, what were their strengths? Were they in teaching, were they in research, or both?

Spieth: Both.

Brienes: Did they prove to be good teachers?

Spieth: They were all good teachers, deeply interested in undergraduate education, and at the same time competent investigators.

Brienes: Did any of them have any concerns about the fact that their own research would be altered or curtailed by coming to Riverside?

Spieth: Newell was in Hawaii and wished to return to the mainland since his own area of research could be much better delved into on the mainland. The other individuals were all seeking their first full-time positions as young faculty. Goodman had a research appointment at Mississippi State but he was not particularly happy and his best friend from graduate days at Cornell was a member of the Department of Plant Physiology at Riverside. Indeed, I became acquainted with Goodman's abilities and availability through this friend, Randy Wedding. Gross was at UCLA and did not have a permanent position at that time; he was delighted to come to UCR. Adelaide Brokaw was looking for a job, having just received her Ph.D. at Stanford and likewise Prout, the most imaginative investigator of the five, had just completed his degree at Columbia.

Brienes: You had five faculty members and yourself. Were you teaching full time?

Spieth: No, half time.

Brienes: How did this stack up against the other divisions in terms of the size of the faculty?

Spieth: The other divisions were all larger. Furthermore, the other divisions all had one or more senior faculty in the beginning. A very distinguished man, Philip Wheelright, was brought into the Division of Humanities as a full Professor of Philosophy. In the Physical Sciences Division, Pierce acquired some associate professors in addition to a number of assistant professors. In the Social Sciences Division, Nisbet (our Dean) was a full professor as was Turner, the chairman. So both in size and experience, I had the most juvenile faculty, so to speak.

Brienes: I can understand your size being different from other divisions, but why was it that you were allocated apparently less money for faculty salaries?

Spieth: I think for various reasons. I do know that Blacet of UCLA was on the committee that advised in the organization of the campus and he insisted that there be some positions of higher rank in the Physical Sciences Division. Olmsted in Humanities was close to Watkins personally and also knew some of the people on the advisory committee. There was no one on the committee that pushed for Life Sciences. Then, too, I was the only division head who came from outside the State of California.

There were numerous faculty at the Experiment Station who were competent biologists but who were not teaching. I suspect, although I have no evidence, that they thought perhaps some of their people would be given teaching positions in the College of Letters and Science. I also suspect, although I have no evidence, that Watkins did not wish to do this -- that he preferred to have a new faculty and a young faculty. It was his conservatism plus the lack of an advocate on the advisory committee that resulted in the Life Sciences Division being somewhat neglected.

Brienes: I am not quite sure that I understand what you said -- but are you saying that people at the Experiment Station expected to get faculty positions when the new College opened up?

Spieth: I do not know whether they did or did not; I suspect that some of them hoped that they would get some teaching assignments because this had occurred at Davis, you see. Most of these people were faculty of the Experiment Station but not of the College of Agriculture. They therefore did not have Academic

Spieth: Senate titles. If they were given teaching assignments they would have become members of the Academic Senate as well as of the Experiment Station.

Brienes: Now I know that there was some difficulty at Riverside, as I guess one could expect any place where an existing institution has another body laid over it. I would imagine that you being in Life Sciences would have maybe felt it more than some other Divisions would have.

Spieth: No, there was very little, if any, tension of that type. The faculty and staff of the Experiment Station were really generous.

Brienes: Who was then head of the Experiment Station?

Spieth: Alfred Boyce was head of the Citrus Experiment Station at that time.

Brienes: When you first came to Riverside, did you meet Dr. Boyce?

Spieth: Boyce is an entomologist with an international reputation and I knew his name well and had met him while I was still on the faculty of CCNY.

Brienes: Did he express any feelings to you about the fact that the L & S College was coming to Riverside?

Spieth: No, not at all. He was the man who told me about Newell and supported Newell's application. He also was helpful and kind in informing me about the operations and regulations of the University, the character of the community and of the surrounding areas. Evelyn independently arrived at the same conclusion that I did that the Citrus Experiment Station's personnel and their families extended a generously warm welcome and thoughtful cooperation to the incoming L & S group. Here they were -- working hard and doing a superb job for many years in the area of subtropical agriculture, especially with various citrus crops. People involved in agriculture knew the quality of their performance but the general population knew them only as a quiet small group of scientists who were located on the edge of town. Then in comes this new group and the papers are full of articles about each new faculty appointment and what's happening at UCR -- as if nothing had previously been occurring on that campus. During all this hoopla and the inevitable disruption of their domain, they extended a welcoming, friendly hand and much assistance.

Brienes: I wasn't trying to push you into anything but I did read something of their discomfort and I just wanted to raise the question.

Spieth: These were research people; few of them had ever been, except during their undergraduate and graduate training, around a full academic faculty, a college faculty. Most of them were not intimately concerned with the sort of activities and investigations that those in the humanities and social sciences engage in. They were, however, interested and desirous for the expansion of the campus..... Quickly personal friendships between members of both groups developed.

Brienes: As far as you're concerned, there was no sense of any power struggle? Anything of that sort?

Spieth: No, or at least I did not detect it. Not only was I busy, but perhaps I am rather insensitive to such matters. Relationships between departments and other units on any campus usually have tensions. Put it another way: I do not think the difficulties of the Experiment Station vis-à-vis the College were any greater than the problems existing between departments within the Station. I quickly learned that Director Boyce was not appreciated personally by various Station faculty even though they respected him as an administrator. But this is the fate of being an administrator.

Brienes: Let's turn to the first year of teaching when the University opened, which must have been a very exciting period. Was that the fall of 1954?

Spieth: Wait a minute. Let me first say something else about the faculty. The faculty that I hired had the characteristics, I thought, to enable them to handle graduate students as well as undergraduates. The second week after I reached Riverside, I began to seek information about the kind of students and the number of students we might expect in the Life Sciences. I found that the State Department of Education published adequate data on these matters.

Spieth: It was possible for us to find out how many students were in each year of high school in the State, how many in each grade, and so on. I could tell the size of the school population accurately, and I found this interesting. I suppose other states compiled such information, but at CCNY I had carefully stayed away from any administrative duties and I had never before run into such data.

Brienes: There was one other bit of information that was quite startling to me, namely, that out of each high school class graduating each year, about five percent came to the University of California. You could go through the lists of all the high

- Spieth: school classes and then make the assumption that the amount of immigration would be equal to the amount of migration. Thus if you found a hundred thousand students in third grade in the entire State, you could assume that by the time they were graduated from high school there still would be about a hundred thousand of them. Then using the five percent figure, one could tell approximately how many students would be entering the University of California five or ten years after 1953. It was perfectly clear that the then existing campuses of the University could not handle the number of students who would be seeking admission in the years ahead. Thus, I arrived at the conclusion that Riverside was not going to be able, in my opinion, to remain a campus of small size and devoted to undergraduate education only. I talked with Pierce about this. As a result of these considerations we deliberately hired faculty members who were interested in undergraduate teaching but who also possessed the temperament and abilities that would enable them effectively and willingly to care for graduate students in the future.
- Brienes: So you were planning for expansion that day you got there!
- Spieth: After about two weeks, yes. I just couldn't see any other way to interpret the facts. To care for the needs of future students, the campus would have to grow bigger than intended at first, and the increased student populations would cause pressures for the development of graduate studies to meet their needs.
- Brienes: Now Watkins would never accept an argument like that.
- Spieth: I do not know that he ever looked at the figures, and I don't think he would have accepted them if he had.
- Brienes: How about the other Division chairmen? Did they in some measure share your view?
- Spieth: Except for Pierce I didn't talk with them about it. The others were so committed to the ideal of a small liberal arts institution that there was not much use to suggest it might be an impossibility. Both Pierce and I changed our recruiting sights in a sense, to be sure we had faculty that could provide adequate future graduate training.
- Brienes: It certainly was a reasonable assumption that Riverside was not going to stay a little school -- not in a big public university.
- Spieth: Well, if there had been room on the other campuses, it would have been all right -- but it was clear that there was not. At

Spieth: that time the Scripps Institute at LaJolla was not a teaching institution but rather was a research institution much like the Citrus Experiment Station. Davis was adding liberal arts as a result of the Strayer Report, but needed time to acquire additional buildings and faculty. Santa Barbara was a small campus, just acquired by the University, and obviously needed to move to a new site since the one it occupied was inadequate. That left Berkeley and UCLA, and neither of them would be able to take care of the numbers of students that would eventually be clamoring at their doors.

Brienes: Well, let me put it this way: You had no objections to the idea of a small, high quality liberal arts school?

Spieth: No, in fact I was a bit sad about the development that I concluded would inevitably occur.

Brienes: But there was something inevitable about the way things were going.

Spieth: It was inevitable to me, and it was my responsibility to see that Life Sciences got started properly. If I had brought in a faculty that was totally and utterly committed only to undergraduate teaching, then it would have been difficult to shift over later on, at least without creating trauma in their minds.

Brienes: Was there anything else you wanted to say in regard to the recruitment of faculty?

Spieth: My own estimate was that by the time graduate work was added to the work of the campus, I would no longer be chairman, and I wanted the new chairman to inherit a faculty that could and would continue to be devoted to undergraduate teaching. This was a difficult task. I had only assistant professorships, Step I, to offer, and had to cover the entire field of biology. Furthermore, it was not easy simply because I could not come right out and say "We undoubtedly will have graduate work". I could not actually predict this, but I believed it to be true. At any rate, I immediately eliminated a number of candidates because they did not care to be associated with an institution that was not limited to undergraduate teaching. I think I was at least moderately successful. With one exception each of the individuals I hired was quite able to direct and teach graduate students as well as undergraduates, and has done so successfully ever since. The one individual who can remain unnamed simply was not psychologically prepared to do so; however, he was able to engage in other campus activities that were important so that he has been a valuable faculty member. None of the individuals whom I selected failed.

Brienes: I would like to turn for just one moment to the problems of the first two years, let's say, while you were chairman of the Division of Life Sciences. I want to find out a little bit about how the College was running, what the major problems were, and how you attacked them, and how you felt they were met. What would you say were the major problems that you faced or were challenges in those first two years?

Spieth: Of course, the first one is the one we have been talking about -- recruitment. The second one I would say was our space allocation. I do not know the entire history of all the considerations that went into the design of the building we occupied, which was named Weber Hall after a previous Director of the Citrus Experiment Station. Life Sciences was assigned the first floor and departments of the Station were on the second and third floors.

Brienes: So the Citrus Experiment Station had two floors and you had one. Had they been there already?

Spieth: No, this was a new building. The area we were assigned consisted of teaching laboratories, a small animal room, and rather tiny offices for the faculty members. There was one small laboratory that was designated as research space for the entire faculty. We had no greenhouse facilities. Watkins had not brought the blueprints for this building with him when he came to interview me in New York in the fall of 1952. As I told him later, if I had seen those blueprints I probably would not have accepted the job. Although I had anticipated an undergraduate institution, I also had anticipated that there would be adequate research space, which there was not.

Brienes: Who was responsible for planning that building?

Spieth: The building was planned by a committee drawn from other campuses and from the Experiment Station; a friend of mine was the chairman of the committee. We have superficially talked about the matter often over the years, but I have never really thought it was worthwhile really to dig into why the building was thus planned. It was, however, one of the factors that led me to believe that probably the Citrus Experiment Station people hoped that they would be selected as faculty members in Life Sciences. They could use the space designed for teaching for classwork, but would do their research in their own laboratories which belonged to the Station.

Brienes: Now, if you had poor facilities for research, how about the use of facilities of the Experiment Station? Were they open to you?

Spieth: No, they were not -- because actually the Citrus Experiment Station was also crowded. There was no question about that. They had grown very rapidly as far as research projects were concerned in the years following World War II, and they desperately needed additional space. So I did not feel in any sense irritated at the fact that they had acquired research space in Weber Hall, and it was clear that they had no space to give to new faculty in the Life Sciences for research.

I immediately began an attempt to get additional space not only for Life Sciences but also for the Station. It was logical that Life Sciences should be first in line for the next new building on the campus. We would then leave the first floor of Weber Hall for the needs of the Station personnel. But it would take time to build a new building. So I managed to induce the University to build two greenhouses for the Division. It had been traditional at Riverside that greenhouses should have an attached "head house" to contain facilities for supportive research performed in the operation of the greenhouse proper, i.e., storage of materials, housing for equipment, etc.

Brienes: How substantial a building would the "head house" be?

Spieth: Well, it would not be what we call a Class A building in any sense. It would be a building attached to the end of the greenhouse, one story high and moderately small. I was successful in this plan, and we transformed the head houses into faculty research offices.

Brienes: Is it still a greenhouse, too?

Spieth: Oh yes, the greenhouses proper we used for experimental plots, animal housing and aquaria, but the attached head houses had modestly sized offices which were not used merely for storage and the housing of equipment but provided housing for faculty. It was sort of a roundabout way of getting faculty research space.

Brienes: That's the way you, at least for the time being, solved the problem. How fast were these greenhouses put up, with offices in the head houses?

Spieth: At this stage in time [laughter], I can't exactly recall whether it was two years or a little less. But the first major building to be built on the L & S campus was the new Life Sciences building which became the first unit of the present Life Sciences building. In the meantime my major problem was getting research space for the faculty.

Brienes: Was the new Life Sciences Building opened up after you became Chancellor?

Spieth: It was opened up the year after I became Provost.

Brienes: And what happened to Weber Hall? Did you still retain your offices?

Spieth: No. We evacuated Weber Hall and it became a portion of the Citrus Experiment Station space.

Brienes: So they took over the whole of the building -- and did that solve their problem also?

Spieth: It helped to solve their problem.

Brienes: How about labs for student use? Were they adequate in Weber Hall?

Spieth: The undergraduate laboratories were quite adequate. We also had an adequate, but not by any means excessive, sum of money for equipment such as microscopes, centrifuges, sterilizers, and other accessories that were needed for the instruction of undergraduates. We had no money for faculty research equipment.

Brienes: I understand that you spent a good deal of time running around getting all of the stuff together from various places.

Spieth: Of course I had no faculty when I first arrived -- and they did not come until shortly before the students enrolled a year later. It takes time to buy equipment. I bought or ordered most of it, but not all of the equipment by any means for I simply was not competent to select some of the specialized items needed for advanced courses. I did get a sufficient amount to begin instruction in the basic courses, and I planned the curriculum primarily on the basis of my CCNY experience. After all, we were quite similar to CCNY in the scope of our teaching responsibilities.

Brienes: Being totally undergraduate?

Spieth: Not only were we totally undergraduate but at CCNY we had a Biology Department that encompassed Microbiology, Botany and Zoology -- and that is what we had at Riverside. Consequently I did have adequate background to buy basic things needed for the freshman and sophomore courses.

The next big problem was that the building was not air-conditioned, and I was frankly horrified at this because much

Spieth: of modern biology has to be done under controlled temperatures and at least in buildings in which temperatures can be kept fairly moderate. With a modern building whose windows could not be opened, with forced air ventilation and a hot climate (which is not too different from the Davis climate), I knew we were in trouble.

Brienes: Sort of desert there, isn't it, in many ways?

Spieth: It has a little less rainfall than Davis has, but the maximum temperatures in the summer are practically the same as in Davis. Perhaps it is slightly higher on some days in the daytime, but always cooler at night. I immediately began to press for air conditioning. I was assisted in this by the Experiment Station personnel who were occupying the upper two floors and who were suffering severely. Plant Biochemistry and Plant Pathology were located on these upper floors. They lost a lot of their experiments, long-term experiments, as a result of no temperature control. We were able to prove to the administration and then, in turn, to the State financial officers, that we were actually being penalized financially as well as scientifically -- and so the building was air conditioned. I think it was probably the first major air conditioned building, or one of the first, in the University. And that made a very great difference. We often laughed that it wasn't the faculty and students who were thus salvaged, but the experimental plants and animals.

Brienes: At Davis at this time weren't there similar buildings that would have needed air conditioning, too?

Spieth: I think perhaps at Davis they were using area or window air conditioning, but Weber Hall was constructed in such a way that window units could not be effectively used.

Brienes: You couldn't stick one in the window or casement?

Spieth: No, and the architects were adamant about this. Even if we had done it, the ultimate expenses would have been greater than that of actually installing air conditioning.

I insisted on an air conditioning system that would cause small vibration of the building. I had been at the University of Texas on sabbatical leave a couple of years earlier. The Zoology Department had just moved into a new building, in which the air conditioning had been placed in the basement. The architects had used compressors that created a great deal of vibration with the result that those trying to use microscopes

Spieth: could not see what was on the slides under the microscopes. They had to build a separate building beside the original building and then pipe the refrigerant into the building -- and this was frightfully expensive.

There was available a system that reduced vibration a great deal, namely the system used in the Kelvinator refrigerators. Carrier manufactured such a machine; although it was a bit more expensive than the reciprocal refrigeration units, it produced much less vibration. The only vibration that came from it was from the motors pumping chilled water through the building. This was fine except for one frightful little mistake [laughter]. One of the construction workers, in putting one of the panels on this huge unit, drilled a screw hole too deeply into one of the main pipes. As a result the refrigerant solution inside the machine had eroded the screw and allowed air to get into the system -- and this system cannot tolerate any oxygen in it. The refrigerant degenerated and it took us almost two years to get the system working.

Brienes: To find out where that hole was?

Spieth: It took almost six months to find out where the trouble was [laughter]. It was one of those fateful little mistakes that can be made with modern technology and which can sometimes be disastrous.

Brienes: The same guys that leave sandwiches behind the bathtubs when they wall them up [laughter].

Spieth: That's right.

Brienes: Is this the experience that got you interested in the architecture on campus? I know that you -- at least people have remarked that you took an unusual interest in the buildings on campus and in architecture. Is that what did it?

Spieth: No, this is not the only thing that did it. Throughout my years as a graduate student and as a faculty member, I had developed some strong opinions as to how a University building should be built, particularly that they should be functional for whatever kind of operations were to occur within them and that, in doing so, they should also be pleasant to view and to live in.

In the case of the modern science building, one essentially builds a machine with walls around it. It must have dependable and extensive installations of electrical conduits, water and

Spieth: sewage pipes, compressed air pipes, special pipes for distilled water, as well as air conditioning and exhaustion of gases through fume hoods, and so on. Further, all elements of such a nature must be exposed whenever possible, for as research needs change then modifications must be made and it should be possible to do so as cheaply and effectively as possible.

Another important consideration in climates such as Riverside and Davis is that the building if possible should have its long axis directed east and west. The west wall should have no windows at all. The north side can have the usual number of windows and the south wall should have overhangs to prevent the summer sun from striking the glass. The east side should have relatively few windows. Such construction saves an enormous amount of operational monies. Not only can one thus reduce the size or tonnage of the air conditioning unit but also the operational costs.

Brienes: I would like to turn now to the community of Riverside, especially the community leaders and the activities of the organizations that assisted the campus. There seemed to exist an unusually close relationship between Town and Gown.

Spieth: The citizenry of Riverside had an élan that was distinctive. The community leadership could only be described as extraordinary, and there existed a level of friendship and respect between the campus and the community that has been unique. Gordon deserves full credit for developing this beneficial situation. This relationship functioned primarily through the activities of two organizations, namely, the Citizens University Committee and a social group known as Town and Gown.

In early 1948 John Gabbert, a highly intelligent and public spirited lawyer, a Berkeley graduate, suggested the organization of a broad spectrum committee to help in encouraging the location of the College of Letters and Sciences at Riverside. Howard Hays, editor of the Riverside Press, then invited a group of about one hundred people to meet at a luncheon in the famous Riverside Mission Inn. There the Citizens University Committee was organized on March 8, 1948.

Judge O.K. Morton was elected chairman and an executive committee was formed, consisting of about twenty people plus a number of ex-officio members such as the State Senator and Assemblyman of the Riverside area, the Mayor, and the Chairman of the Board of Supervisors of Riverside County, the President of the Chamber of Commerce. Each year the Committee has a dinner meeting, but it holds breakfast meetings several times during the year.

Spieth: The activities of the Committee historically can be divided into three epochs. At the time of its organization, the Strayer Committee had recommended to the Legislature that the new college be located at Riverside and the Committee's first efforts were directed to inducing the Legislature to accept this recommendation, and to appropriate sufficient funds for the planning and building of campus facilities. This was accomplished during 1948.

The second period extended from then until 1954 when the College officially opened. The Committee was vitally involved in a number of activities which included land use and zoning in the area surrounding the campus; development of transportation and access to the campus, and most importantly its assistance to Provost Watkins and other University officials in the acquisition of critical construction materials during the period following the Korean War. The Committee was helpful in enabling Watkins to approach Henry Kaiser for necessary structural steel and officials in Washington for the release of sufficient amounts of necessary cement. They also sought and acquired monies for scholarships.

The third period, of course, began with the opening of the new College of Letters and Science in February of 1954, and the Committee's active support still continues.

During all the years since 1948 the campus has had the devoted services and support of an organized group consisting of many of the leading citizens and public servants of Riverside and its surrounding area. Their assistance has been of incalculable value, and I am sure it will continue to be so in the years ahead.

Brienes: The Citizens University Committee thus exercised its influence on the city and county governments. Was it primarily helpful at the local level rather than at the state-wide level?

Spieth: The Committee was helpful at all levels, but over and above such help, they developed what can best be described as a climate of understanding in the public at large of the needs and goals of a University campus. As thoughtful and active members of the community, they could explain the operation of the campus without being accused of being self serving.

Brienes: Can you recollect when their aid on the state-wide level was absolutely crucial to you as the chief campus officer?

Spieth: I cannot give a specific answer to that question. During President Sproul's regime, chancellors and faculty were not supposed to deal with the Legislature unless requested to do so by the President or his staff. I, of course, knew the local Assemblyman and Senator personally. I also attended the monthly meeting of the executive committee. Typically I was asked to report on the status of affairs on the campus and thus had the opportunity to express and explain our needs and future plans.

Brienes: It seems that you got along quite well with the Committee.

Spieth: That is a difficult matter to evaluate, but I think we did at least have mutual interests and understanding of each others' points of view. Certainly I developed personal friendships with many, if not all, of the members of the executive committee.

Brienes: Now what was the character of Town and Gown, and how did it fit with the Citizens University Committee?

Spieth: Town and Gown is a social organization whose membership consists of campus personnel and their spouses and private citizens of Riverside and the surrounding area. Membership is open to both groups. I do not know the exact genesis of Town and Gown, but I think it was the brain child of Provost Watkins and Frances Frazier (later Mrs. William White). Frances was the daughter of an old-time Riverside family. She had graduated from Vassar, had done some graduate study at Oxford University, and for many years was Dean of Women at Riverside City College, an excellent junior college. She fully appreciated the value of a program whereby the new faculty and other University personnel could become acquainted with the citizens and other teachers of the community under the informal setting of a social gathering.

Typically each year there were three or four such gatherings held on or off campus -- frequently at the Mission Inn and sometimes at the beautiful Frazier home, and then on campus after adequate facilities were acquired. Town and Gown was in existence when I joined the campus in January of 1953, and I believe it had been organized during the previous year.

In a real sense, the Citizens University Committee and Town and Gown gave us an "instant" Alumni Association of the calibre that only a mature campus could hope to have. Indeed, many members of both groups were alumni of other institutions, more particularly the Berkeley campus and Stanford University. We jokingly and gratefully called these generous friends our "ersatz alumni".

Brienes: Sometimes, though I do not know of its occurrence at Riverside, the citizens or organizations in the area and the University have conflicts over some matters. Did such situations occur at UCR?

Spieth: There was one such major episode at UCR during the time Watkins was Provost. The city of Riverside owned and operated its own electrical distribution systems. The electricity distributed by this system was purchased from the Southern California Edison Company. In the area there was also another company, the California Electric Power Company which had originated in the Owens Valley where it was developed to provide power for the mines at Tonapah, Nevada. The company had extensive water rights on the east side of the Sierras and they gradually extended their operations southward toward the Mexican border. Their headquarters were located in Riverside and understandably since they were currently serving the rural areas they also wished to serve the city of Riverside. A referendum was placed on the ballot which was designed to have the city sell its distribution system to Cal Electric, as it was commonly known.

Brienes: This proposal would then have Cal Electric own the distribution system and also supply the electricity?

Spieth: Yes. This quickly aroused a number of the young faculty members, especially some in the Social Sciences. Under the leadership of an economist, Jerome Rothenberg, they mounted an articulate and vigorous attack against the sale of the city distribution system. I am sure that this caused Provost Watkins some sleepless nights. The officials of Cal Electric were competent and friendly individuals whom Watkins knew personally. Also, I suspect that some of the citizens of Riverside were major stockholders in the company. Probably Watkins was exposed to some polite but frank statements to the effect that the faculty were engaged in ill-advised and unnecessary activity in opposing the sale — perhaps even that the faculty should mind its own business.

Brienes: How did the faculty members express their opposition?

Spieth: They wrote letters to the Riverside Press, which was and still is an excellent newspaper. When I arrived in Riverside, I soon came to the conclusion that it was a better paper than many papers published in larger cities such as San Francisco or San Diego. It was owned by the Hayes family. Earlier I have spoken about Howard Hayes, Sr., who had been the effective organizer of the Citizens University Committee. The Press was a widely read newspaper and any letter published in it reached a large audience.

Spieth: The faculty also analyzed and made public data concerning the possible effects of the sale upon electrical rates, taxes, and related matters. In a real sense, they spearheaded the visible opposition to the sale.

Brienes: What were your opinions regarding the sale?

Spieth: At that time I was chairman of the Life Sciences Division and quite busy developing and expanding the Division as well as teaching and engaging in research, so I did not actively involve myself in the matter. I did believe that the city of Riverside was effectively and competently governed. The officials were men of integrity, honesty, and intelligence. The electrical distribution system operated both effectively and economically -- and at a profit. Cal Electric was also a well run company that provided excellent service to its customers. So I had mixed feelings.

Brienes: How did the vote turn out?

Spieth: To the surprise of many people, the referendum was soundly defeated. I have no way of knowing how effective the faculty activities were but the negative vote was so massive that I seriously doubt if the referendum would have been successful even if the faculty had remained silent. The citizens of Riverside simply wanted to keep their distribution system which they believed to be effective and with lower rates than Cal Electric would have charged.

Brienes: Was there any permanent effect on the campus as a result of the faculty activity?

Spieth: I think not -- except for the loss of an excellent faculty member. Rothenberg was shortly thereafter offered a position at the University of Chicago. He was devoted to UCR and to the ideal of a small liberal arts campus, but felt that there existed such deep-seated antagonism in the community as a result of his activities that he somewhat reluctantly accepted the Chicago offer. He is still a member of that faculty and has an excellent reputation in his field.

Brienes: Did you have any similar experiences when you were Chancellor?

Spieth: Only two somewhat similar situations occurred, and both were less traumatic than the Cal Electric episode. The first concerned a building company known as Sun Gold. Riverside was growing rapidly during the 1950-60 period. Sun Gold was a local company -- and an excellent one. When the college was

Spieth: first developed, the Sun Gold people approached Watkins and the University, seeking information as to the type and price level of houses that the incoming faculty would desire and could afford. On the basis of the information they received, they developed and built several subdivisions in which the houses were not only well constructed but also within the price range that a young faculty could manage.

Later they developed a subdivision near the campus, so situated that it would have been desirable if a new road could have been constructed through our agricultural experimental area. Robert (Bob) Walters, with whom I was quite friendly, sought the permission of the county supervisors to have this road constructed. Not only would it have involved loss of experimental land, but also we had quite adequate data to show that the smog produced by cars would have affected our long term experiments on the citrus trees that were growing alongside the proposed route. At that time the automobile industry was vigorously peddling the myth that automobiles did not produce smog. We had, however, an Air Pollution unit on campus and our data about smog were secure even if not generally accepted by the public. Fortunately this disagreement never became a public issue and eventually we were able to prevent the construction of the road. I can gladly add that Walters and the owners of Sun Gold still remained friends of the campus.

The second episode had more public attention. The automobile dealers of the area banded together and planned to purchase a sizeable tract of land to which they could move their dealerships, enabling them all to be in a central, compact area so that potential buyers of cars could easily go from firm to firm to buy a car or to have a car serviced.

Unfortunately the area they chose was partially surrounded by residential developments. A number of the faculty members lived in these areas and they immediately opposed the zoning of the area for use by automobile dealers. Of course, other residents also opposed the idea, but again certain of the faculty members spearheaded the opposition. They wrote vigorous letters to the Riverside Press.

One such letter which the Press published was written by our Librarian, Edwin T. Coman. A couple of days later, a councilman visited me and protested Coman's action. The councilman's thesis was that since Coman was an employee of a public agency he should not be interfering with the activities of the City Council, which was also a public body. He further



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Spieth: demanded that I prevent such activities by University personnel. I pointed out that Coman had not signed his letter as Librarian but merely as Edwin Coman. I suggested that any individual had the right as a citizen to express his opinion about civic matters and that I would not consider action of any sort against Coman or any other University employee under such circumstances. The councilman stalked out of my office and I do not recall his ever again speaking to me. The automobile dealers, however, eventually were unable to achieve their plans to use the disputed site.

This episode does illustrate one point on which I have a strong opinion, namely, that when a faculty member writes a letter in his capacity as a citizen he should not sign his official University title to the letter. Many academics and the editors of The Riverside Press disagree with this point of view, but I still firmly support my belief.

Soon after I became Chancellor, a different but somewhat troublesome episode occurred when the campus Committee on Arts and Lectures invited the poet Langston Hughes to speak on campus -- to discuss and recite his poetry. Hughes had at one time in his life been a member of the Communist Party. As soon as his program was announced, a number of the local citizens reacted quite vocally in demanding that I cancel the program. I said that he was coming as a distinguished poet and refused their request. Some of the ladies in town deluged Evelyn with telephone calls, urging her to use her influence to change my position. Finally Joe Rice, Sheriff of the County and an important political figure, lectured me about the matter. Hughes did appear and gave an excellent program which was appreciated by a large audience. I think the incident was mostly forgotten in a year or so, although a few die-hards never did quite forgive me.

Brienes: The citizens of Riverside appear to have been rather unusual in their outlook and attitudes. Was there an old, established elite? -- families that had been there many years?

Spieth: Riverside was founded in 1870 and incorporated in 1883. John W. North was the catalyst in its formation. He had been a minister, abolitionist, and delegate to the convention that nominated Abraham Lincoln for the presidency. Later he was Surveyor General and then Judge for the territory of Nevada. He organized the Southern California Colony Association and induced people from the east to participate in it. Sufficient numbers joined the colony in Riverside that they were able to develop planned streets and parks, plus an adequate irrigation system. They also built

Spieth: churches and schools. A considerable number of settlers came from Canada, bringing with them English traditions. Among them was Matthew Gage from Ontario, Canada. He had a genius for financing and developing an irrigation system of superb quality. The economy was agricultural, primarily based on citrus. In 1873 Eliza Tibbetts had induced the Department of Agriculture in Washington to send her three navel orange plants, and it was thus that Riverside started the navel orange industry for the state of California.

The intellectual and social milieu established in Riverside was not that of the frontiersman but more similar to that of the English squire and with a deep respect for intellectual achievement. A major street was named Victoria Avenue in honor of the Queen of England. The town grew relatively slowly during its first fifty or sixty years, and the attitude and mores of the leaders became firmly imbedded into the community, especially a sense of civic responsibility and community planning. There also existed a high regard for personal courtesy as well as formality in social affairs. We quickly learned when we arrived in Riverside that many a dinner party or any major social gathering normally required formal dress.

Brienes: How strange for California! Has it remained the same?

Spieth: No, there have been changes. Riverside has grown enormously since the end of World War II and there has been a vast influx of population which has changed the city drastically. Agriculture is no longer the dominant industry. A number of other industries and large retail stores have located there. But traces of the old traditions still remain, and so far as I can tell there still remains the same psychology of careful planning that has existed since its inception.

Brienes: I am curious to have you contrast Davis with Riverside.

Spieth: Davis today is about the same size as was Riverside when we arrived there in early 1953, but the Davis of today is quite different from the Riverside of 1953. Riverside is the county seat and Riverside County is almost as large as all the New England states combined. As a result of being a governmental center, the city had several state and federal governmental units in addition to the county agencies and bureaus. It was also a major retailing area for the county and had a number of excellent retail stores, including Sears Roebuck, Harrises and others. The main county library was an excellent one. There were a number of banks, one of which was the Citizens Bank which had its headquarters in Riverside plus numerous branches in the surrounding towns.

Spieth: There was an active YMCA as well as a YWCA. I do not know the history of these organizations, but I suspect they were built as a result of the presence of March Air Base which is located just a few miles south of Riverside. March is one of the four oldest United States air bases, whose personnel often choose Riverside to return to upon retirement. Riverside possessed an Opera Company of which Marcella Craft and John Gurney, retired stars of the European Opera and The Metropolitan Opera Company, were active members. There was also a Symphony orchestra, a small but excellent Natural History Museum, and an outstanding and influential newspaper. Finally, there was the world famous Mission Inn, which had long been a center drawing winter tourists for prolonged stays.

In the academic area, there was Riverside City College, a respected and established junior college. The USDA Salinity Laboratory was located in Riverside, and the Citrus Experiment Station, with a world wide reputation in the area of subtropical agriculture, had been established in 1907.

Riverside was noted for the number and beauty of its trees, especially its street trees as well as its orange groves. Archie Shamel, who was then retired but who had been a scientist on the Salinity Lab staff, was the czar of public tree planting. Without his permission no tree could be removed or planted. There were also a number of beautifully maintained parks.

Riverside could truthfully be described as a distinguished small city. In this milieu, the addition of the College of Letters and Science of the University of California was merely a prized addition to the city. In no sense could it dominate the cultural and economic life of Riverside, but rather was regarded as an important enhancement to the existing city structure.

Brienes: Riverside was also sufficiently removed from other cities to avoid serious competition?

Spieth: San Bernardino and Redlands were the nearest cities. San Bernardino had been founded by the Mormons. Brigham Young decided that he needed a "listening post" in the Southwest to keep track of the behavior of the gentiles. From the information that he had gained from the Mormon battalion that had been with Kearny during the Mexican War, he chose San Bernardino. It was thus older than Riverside and had become the industrial city of the region.

Spieth: Larger than Riverside, it did not appear to have the cohesiveness that Riverside possessed. Redlands was smaller and primarily agricultural. Redlands University was located there and San Bernardino had a junior college of high quality but naturally it emphasized technical pursuits more so than did Riverside City College.

Brienes: Let's turn to your personal friends -- your Riverside friends, both on and off the campus.

Spieth: Let's consider the campus first. Those of us who came to be known as the Hill-Toppers -- that is the small group that spent the first year organizing the College and working in the Director's old home -- were quite congenial. We respected each other and formed lasting friendships. My closest friend within this group was Conway Pierce who, as you will recall, was head of the Physical Sciences Division. We had much in common, and our two families became fast friends. Both of the Pierces are now gone, and Evelyn and I miss them deeply.

When the L & S faculty arrived in 1953 and 1954, most of them (not only in the Life Sciences Division but also in the other Divisions) were one to two decades younger than I. Naturally the youngsters formed their friendships mostly with their peers of the same age, but there was really a rather fine esprit de corps amongst those of all ages. Prout and Ruibal, young men in Life Sciences, had both taken my course in Insect Biology at Columbia University, so I had known them for some years. We had and still have the type of close relationship that existed between the Melanders and the Spieths in spite of an age differential. As a matter of fact, I had known Rudy Ruibal's charming wife Irene in New York before I knew her future husband.

In town, the Melanders were our closest friends, and through them we learned to know John and Bertha (Buff) Sperry. John Sperry, a civil engineer and business man, was an ardent student of Lepidoptera and was known around the world for his work on that group. Indeed, his valuable collection now resides in the American Museum of Natural History. Possessing sufficient wealth to enable him to devote almost full time to science, he had built a laboratory as part of the Sperry home which was around the corner from our first home in Riverside, and we quickly formed a close and lasting friendship. The Melanders we had, of course, known in New York. Axel Melander was one of the world's outstanding investigators of Diptera, so he and John Sperry and I had many interests in common.

Spieth: Our next door neighbor was Helen Marie Parker (now Mrs. Arthur Babcock), the widow of a Citrus Experimental Station Scientist. Her daughter Joan is a few years older than our son, but the two quickly became friends, both enjoying the same type of humor and outlook on life. Joan later married Gary Lawrence and lives in the Bay Area not too far away from the Philip Spieth family, and the two families are fast friends. Indeed, the Lawrences are godparents of our granddaughter Kara.

Brienes: These constituted your close and intimate friends, but were there not other people whom you considered as friends even though you may not have had such close relationship with them?

Spieth: Yes, of course. There is a spectrum of friendships which fall from close friends to acquaintanceships. I am reluctant to attempt to make a list of the friends either on campus or in the community. UCR was a close knit, relatively small organization and there were many people in the community involved in the welfare and development of the campus. If I start listing individuals by name with whom I developed close friendships it would run to many scores. I can also truthfully add that I still cherish these friendships and certainly would not wish to be remiss in omitting names of any of them.

It was, of course, rewarding to learn to know the townspeople who were taking a great interest in the development of the campus. I cannot conceive of myself as engaging in any occupation other than that of being an academician, but I prefer, and have always sought, to be involved with a broad range of others outside the academic world. In a sense academicians belong to the same union, or perhaps one should say priesthood, and we possess similar characteristics. Our outlook on the world is therefore limited even though interesting and often fascinating. But I like to interact socially with individuals from other walks of life to be kept aware that there are other valuable and interesting perspectives of the society and culture in which we live.

Brienes: Were you therefore involved in organizations and off campus activities?

Spieth: Yes, at the behest of Gordon Watkins I became a member of the Rotary Club as a means of becoming acquainted with local citizens. The members of the Riverside club were on the whole an outstandingly fine group of men and I thoroughly appreciated becoming acquainted with their work and viewpoints.

Spieth: Typical of the quality of the membership was a chap by the name of Button. During World War II he had been appointed in charge of the affairs of the Japanese who had been interned. He adamantly refused to allow any devious or improper actions to be taken concerning the property of the internees. His unremitting and dedicated efforts resulted in the Japanese people of the area being treated much more justly and humanely than was true in some other places. Sumi Harada was one of these whom we came to know and respect. Her father had been the first Japanese to own a home in Riverside. He and his family, including Sumi, were put in concentration camps during World War II and the mother died in one of them. But when the war was over, the Harada home was still theirs -- and Sumi is still living in it.

I also became a member of the Tuberculosis Society board of directors and of other groups.

We attended church. Some people cannot conceive how a committed evolutionist could actively engage in religious affairs. Without entering into an extended and complex discussion of the matter, I can only say that I cannot agree with their point of view. Suffice to say that I eventually became a Senior Warden in my church and found it an illuminating experience.

Brienes: I suspect that your involvement in the community affairs increased after you became Provost.

Spieth: Yes, Evelyn and I had been members of Town and Gown from the time we arrived on campus. Just about the time that I became Provost, the morale and effectiveness of the organization suffered a lapse. We both spent some effort in quietly trying to revive the organization and I think with some success. During the remainder of the time we were in Riverside, it developed an effective program and served an important function for both the campus and community. It is still an active organization.

Spieth: Of course I automatically became a member of the Citizens University Committee. I served one year as president of the United Fund as well as being a director for several years. I became a member of the Chamber of Commerce. These activities came, of course, from my being Chancellor rather than from any innate abilities of my own. They did enable me to become acquainted with a large number of interesting and thoughtful individuals, both women and men.

Brienes: You inferred earlier that Evelyn made friends in the community. Did she also become active in organized groups?

Spieth: Evelyn does make friends easily, is competent as an organizer and administrator, and she is adept at public speaking. Among the various types of civic activities in which she engaged that I can recall now was serving on the boards of the Symphony and Opera Associations, the American Association of University Women, PTA, the foreign affairs section of the local Women's Club. She took active interest in the Settlement House, and especially in its scholarship program for minority youngsters. One year she was co-chairman of the women's section of the United Fund drive. Perhaps her work as a member of the city school's Gifted Child Committee intrigued her most and she devoted a great deal of time and study to its program.

On campus she became closely involved with a number of student organizations as well as with the work of the Campus Club and Dames Club, particularly in connection with encouraging new faculty and student wives in becoming acclimated. She spent considerable time in encouraging the development of the Lending Library which gathered and loaned to international student families various types of household equipment. The Watkins House Association was another interest. I probably have missed some other of her activities.

Brienes: As Provost and later Chancellor, you must have been required to engage in a certain amount of entertaining. How did you accomplish this?

Spieth: Before answering that question I would like to backtrack to describe the status of the campus and especially of the College of Letters and Science at the time when Watkins retired and I became the chief campus officer. This would set an appropriate background for answering your question. It will take a bit of time to do so, so please ask any questions you wish as we go along.

Brienes: That seems reasonable.

Spieth: Watkins was scheduled to retire July 1, 1956. In the University of California the President appoints a committee to advise the Regents and himself when a chief campus officer is to be appointed. In the 1950s such committees were confidential but I have reasons to believe such a committee existed. My own choice was Robert Nisbet and Conway Pierce felt similarly. One day out of the blue Watkins asked me to provide him with a complete and up-to-date dossier of my career. The implications were troubling. I had no desire to be chief administrator, and as I said earlier I was looking forward to the time when I would no longer be a divisional chairman and could devote full time to research and teaching.

Spieth: As a member of the faculty, however, I was concerned about the qualities and point of view of the next administrator, for by 1956 I was more convinced than I had been in 1953 that the College was destined in the next five years to become a general campus with graduate studies. I did not want a chap who was adamantly committed to the undergraduate-only thesis, nor did I want a gung-ho chap that would try overnight to convert the campus into a small mirror image of UCLA or Berkeley, and in doing so would destroy the high quality undergraduate program that we knew had been achieved. I believed the campus inevitably would experience trauma in the next five to ten years, but I didn't want destructive trauma. What I hoped for was the maintenance of our excellent undergraduate program, moderate growth of the student body, and gradual development of graduate and professional programs of a quality equal to that of the undergraduate program.

Brian: I seriously considered refusing Watkins' request but after talking with Evelyn I finally complied. Some time later the President's office asked me to meet Vice-President Wellman who was visiting the UCLA campus. Wellman was the man whom I had convinced that Life Sciences needed the greenhouses and that we needed a new building. I hoped and thought that perhaps he wanted to talk with me about the equipment needs of the new building -- especially since President Sproul would have been the logical person to talk about the Provost opening.

Spieth: When I arrived in Los Angeles, Wellman told me that I had already been appointed by the Regents as the new Provost and that President Sproul had sent his regrets that he could not personally tell me this -- but President Eisenhower had asked Sproul to represent him at the inauguration of President Rhee in Korea and so Sproul was out of the country.

Brian: Normal procedure was for a public inauguration to be held to install a new Provost or Chancellor with Regents, state-wide University officials and delegates from other institutions present. Wellman therefore immediately went on to ask if I wished a formal inauguration. My answer was no. I suggested that we could better save the energy of many people and also avoid inevitable expenses to the University. In the back of my mind I had another reason. I did not want formal speeches and informal discussions which would have dealt, at least in part, with the probable future of the campus. The mere fact that a scientist was being appointed and one who was known to be a close friend of Pierce, another scientist, was, I felt surely, sufficient to create trauma in parts of both the student body and the faculty.

Brienes: So you were making a political type decision immediately?

Spieth: I suppose that is an apt suggestion.

Brienes: What was the size of the student body at that time?

Spieth: We had 752 in the College during 1955-56. We had started with 126 in 1954.

Brienes: Had the faculty also grown?

Spieth: When the College started the faculty numbered 45 and by 1956 it was over 80. Thus we had about doubled the faculty. Of these, 53 were in the Divisions of the Humanities and Social Sciences, both of which had grown faster in faculty than had the science divisions.

Brienes: Had the administrative staff grown comparably?

Spieth: No, not at the top, but secretaries and comparable positions had increased adequately. The heads of the administrative areas were the following: Edwin Coman, Librarian; Howard Cook, Public Information; John Clark, Accounting; Frank Gurll, Registrar; Charles O'Neill, Business Manager; Phyllis Staples, Personnel Director; Albert Haight, Architect and Engineers; and Dr. Fred Veitch, Student Health Director. These individuals were responsible to the Provost and had campus-wide responsibilities.

The number of faculty members I gave above of course does not include the CES people; there were ten different departments in the Station, several of which had larger numbers of faculty than either the Physical or Life Sciences. In addition, the Station had large and complex research programs which involved numerous non-academic personnel. Thus the eight general administrators such as Clark, Cook, etc., had much larger responsibilities than those generated solely by Letters and Science.

Nisbet was Dean of the College; Boyce was Director of the Station; Hewitt, Olmsted, Pierce, and Turner were still heads of their Divisions and I immediately appointed the botanist Goodman as head of Life Sciences. Broadbent and Loda Mae Davis were the Deans of Students.

Brienes: You have previously spoken about these people. Can you say something about the eight individuals who had campus-wide responsibilities?

Spieth: Previously I have spoken about Coman, the Librarian. He worked effectively and diligently to build the collections but he was constantly frustrated by lack of funds. The building of an adequate University library collection even in those days was an expensive undertaking. At first we had an open library in every sense of the word. Eventually, over his vigorous protest, I had to order controls installed -- not so much because of the actions of our own students, but because the library had become known for its high quality and outsiders from several other institutions located at some distance from the campus began to abuse the open system.

Because of the unique position any librarian occupies on a campus, plus the fact that he had been Watkins' earliest appointee, Coman felt that he deserved to be involved in any major meetings and especially in social affairs. As the campus grew and diversified this was not always possible. As an example, one Regent called to tell me he would like to give a luncheon during a prospective Riverside visit. He gave me a specific list of campus individuals he wished to have present. Coman was not on the list. When he later learned about the luncheon, he angrily wanted to know why I had not included him. I gave him the reason and I think he accepted my explanation, but I doubt if Mrs. Coman did.

Howard Cook, charming and shrewd, was an excellent Public Information officer. A graduate of Berkeley, he was devoted to the University. When Kerr was still Chancellor of the Berkeley campus, he asked President Sproul to transfer Cook to Berkeley. I protested that we much needed Cook at Riverside, and Sproul refused Kerr's request. When Kerr became President, he immediately ordered Cook transferred to his office. I am sure that Cook was pleased to have been selected, but when he arrived he was, according to what I later learned, not accepted with open arms by other persons in the area of Public Information. Knowing the characteristics of the individuals involved, I was not surprised at this situation. What I did not know, and I doubt if Kerr knew, was that Cook was a manic-depressive and a few weeks after going to Kerr's office he jumped off the Golden Gate bridge.

Brienes: How tragic!

Spieth: Truly it was a great loss, and I still think that if Howard Cook had remained at Riverside he would now be alive. George Petrie, a UCR graduate, replaced Cook in 1959.

Spieth: Dr. Frederick Veitch was the Student Health officer. I could talk for more than an hour about the unique and valuable contribution he made to UCR. In brief, with Watkins' full support, Veitch had developed a California Physicians' Service insurance plan, paid for by student fees, that utilized the services of local physicians. These doctors spent a regular number of hours on the campus. If a student became seriously ill, he or she would be placed in the excellent Riverside Community Hospital. This enabled the campus to devote only a small portion of the Student Health building to rooms with hospital beds. Furthermore, the insurance remained in force when the student was at home or elsewhere on vacation or trips away from campus. By special arrangements the student could also have similar protection during the summer vacation. Fred ran a fine show. He was both an excellent physician and a good administrator. Only rarely did a problem arise which needed my attention. One such I remember.

A number of coeds began demanding that the Health Services provide them with "the pill" without cost. Fred resisted these demands and finally had a visit from the mother of one of the girls. She told Fred, "You know and I know what sorts of activities many of the coeds are engaging in, and if they become pregnant it will interfere drastically with their education and their lives. It is imperative that you provide these girls with the pill if they so desire. Since they are paying for Student Health services, the pills should be supplied without cost". She added, "I am going to do everything I can to see that you do".

Fred came to me for advice and hopefully for support. At that point in time, the pill had not been in use long enough to know if it would have any side effects. As a biologist I was certain that any medication that interfered with the complex human hormonal system, to the extent that the pill did, would have serious long term effects on at least a sizeable percentage of individuals. My answer was that under no circumstances would the campus provide either the pill or prescriptions therefor. This decision did not help either Fred's or my image with some of the students but I think history has proved it was a correct one.

Finally, I would add that Fred Veitch and Thomas Cooper of the Davis campus are the two finest University medical officers that I have ever known.

Phyllis Staples, wife of Alex Staples who was a respected Judge in Riverside, was an experienced and capable Personnel

Spieth: Manager. Alex developed a rapidly growing cancer and died rather quickly. This was a crushing blow to Phyllis and she left shortly thereafter to be replaced by Sue Kelley, a delightful and able Irish lass. Both Phyllis and Sue handled their responsibilities well and I enjoyed working with them.

Frank Gurll, of French Canadian descent and a graduate of Brown University, was our Registrar replacing Gilliam, now at Berkeley. Registrars, like accountants, must possess the type of mentality that enables them to enjoy keeping exact records. Often such individuals tend to be excessively rigid in their outlooks. Frank seldom exhibited such a trait and was respected by the campus community.

The final three, Clark, O'Neill and Haight, occupied anomalous positions in that under Sproul's regime as President they were members of the campus administrative staff but they did not report directly to the Chief Campus officer, but rather to their respective statewide Vice-Presidents at Berkeley. This was, by the way, true for all campuses and created repeated problems for the Chancellors and Provosts, especially those of the large campuses at Berkeley and Los Angeles. When Kerr became President he quickly changed this troublesome pattern.

Charles ("Chuck") O'Neill had been manager of the local Chamber of Commerce when Watkins early acquired him as Assistant Business Manager. William Drew, then Business Manager, retired in the early 50s and Watkins then made O'Neill manager. O'Neill had excellent assistants: Ed Schroeder, Police; Pat Murphy, Purchasing; Dean Boen, Buildings and Grounds; and Jim Wilson as Assistant Business Manager.

O'Neill himself was a competent individual but had some difficulty understanding the mores of a University community and especially those of a Letters and Science faculty. I doubt if he ever came to understand the subtle but real differences in attitudes that distinguish a university faculty from some other segments of our society. As an example, a member of the Humanities Division was seriously derelict in paying bills that he had run up with one of the local merchants. O'Neill demanded that I order the chairman of the Humanities Division to see that the debts were paid. I demurred and he replied that the procedure he was suggesting would have been used by any responsible business organization. I countered by suggesting that the merchant could effectively garnishee the salary of the faculty member and that I would be happy for him to do so.

Spieth: Similar situations in which I had to refuse to follow his advice occurred during the years and Chuck freely expressed his views both on and off the campus as to my recalcitrance.

John ("Jack") Clark was a capable Accounting Officer, respected and admired by his staff and the faculty. He and O'Neill often disagreed on matters which involved their mutual responsibilities and, furthermore, their personalities clashed. Jack was offered a position at another institution which encompassed greater responsibility and salary than did his position at UCR. He therefore, to my dismay but understandably, left UCR. We fortunately were able to acquire Warren Schoonover as a replacement. He equalled and sometimes exceeded Clark in all respects.

The office of Architects and Engineers was responsible for advising in the planning of new construction and the overseeing and inspection of any construction in progress. Albert ("Al") Haight, a reserved, modest chap, was held in high respect by all who knew and dealt with him.

My own office staff consisted of two people: Helen Freeland was my Administrative assistant, and Virginia Stephens my secretary. Mrs. Freeland had earlier been Administrative Assistant for Director Boyce and then later Provost Watkins. Mrs. Stephens was the secretary for Life Sciences and I stole her when I became Provost. They both possessed the attributes of outstanding integrity, intelligence, and dedication that are essential for the office of a chancellor. I owe them an incalculable debt and it is a pleasure to thank them for their contributions to UCR. The three of us worked unconscionably long hours.

Brienes: This seems to have been a rather small administrative staff for a campus which was a part of a system such as the University of California.

Spieth: It was certainly minimal when one considered the total responsibility and scope of activities of the entire campus. There was always an unconscious tendency to consider only the size of the College of Letters and Science, forgetting about the Citrus Experiment Station and its multiple functions.

When I came to Davis as chairman of the Department of Zoology, I had the same size personal staff as I started with as Provost at UCR. Watkins had run the campus as if it were a department and I had followed his pattern. This was a serious mistake I realize now. I should early have acquired

Spieth: one or two additional people at the level of administrative assistant or higher to have assisted me.

But if we had a minimal administrative staff, we were subminimal at that time in some other areas. The student book store was crammed into a small area of the gymnasium. The campus food service was housed in a converted small horse barn which had been the building where draft horses for the Experiment Station had been kept before the advent of tractors. Rehabilitation had converted it into an attractive and popular place known as The Barn, but the food service was limited to a snack bar. We also had no student housing other than 275 units of World War II housing which Watkins, with Wellman's help, had acquired in 1955 to accommodate married students and some young faculty families.

With this long background, now we can return to your original question about entertaining.

When I became Provost we lived in the small home that we had acquired when we came to Riverside in 1953. We could use it for small groups, but for large affairs we used the Mission Inn where the Galeria, Atrium, or main dining room made attractive settings. The Watkins had proceeded in a similar fashion for they had lived in a modest apartment. Normally such activities would have taken place on campus at a faculty club or student union, which we did not have for quite some time. We did sometimes use the existing faculty club which was an old army barracks that the CES faculty had purchased as surplus and had themselves physically moved onto the campus. It lacked dining facilities and was relatively spartan in all respects, including space.

President Kerr and the Regents appreciated the difficulties created by the lack of a suitable place for our needs and eventually the Regents appropriated special non-state funds for the construction of a Chancellor's home. They also appropriated monies for an architect and the campus planning committee selected a building site. It quickly became apparent that the funds were not adequate for the construction of a house of the needed size.

Philip Boyd had been appointed a Regent by that time and through his quiet assistance an alternate plan was devised. Sun Gold, the organization of which I spoke earlier, purchased two acres of land on the edge of the campus at a cost of \$18,000 as I remember. Sun Gold had their own in-house architect. Evelyn

Spieth: worked with him and our campus architect in planning the house.

The state-wide architects of the University were not particularly pleased with this arrangement, since the specifications were not those for a campus building. They did inspect construction in a rather casual manner. The main inspector was Evelyn who was fully informed about all the details. The building conformed to the county and city codes which were less stringent than those of the University. I fully agreed with the University architects' point of view with respect to major campus buildings, but the Chancellor's house was a home and I felt that the local building regulations were quite adequate for such a structure which did not need to conform to the strict regulations for a classroom or laboratory building. After the house was completed, then Sun Gold sold the land and its improvements to the Regents.

By following this unorthodox method we were able to acquire an adequate house at an economical price. The savings were made in several ways. There was no architect fee, there were no inspection fees, and I am sure that on the basis of the square footage the Sun Gold organization did not make a high profit from the construction. Several of the individuals involved in Sun Gold were members of the Citizens University Committee, were our personal friends and devoted to the interests of the University. Regent Boyd's persuasiveness was certainly most helpful. Donald Bell who was in charge of the construction was an expert and the son of David Bell, a leading agriculturalist in the area and a man whose wisdom and friendship I appreciated.

Brienes: Do you remember how much the house cost?

Spieth: The house cost about \$93,000 and the land \$18,000. An additional sum of \$3,000 was found to cover a few of the larger pieces of furniture needed to augment our own furnishings. Because no funds were available for draperies, we bought those ourselves plus a number of needed small pieces of furniture or furnishings.

Brienes: How is the house demarcated from the rest of the campus?

Spieth: The house is located on the eastern edge of the campus, appropriately facing onto Watkins Drive, a quiet residential street named for Gordon Watkins. Directly westward the back lawn adjoins the Biological Control orchard which is also appropriate, considering my interest in biological control. No insecticides

Spieth: were ever utilized in the orchard in which there were a large number of various types of citrus trees. A portion of the yard beyond the orchard now abuts against the campus Botanical Gardens, which I established over the vigorous protests of Director Boyce of the Experiment Station.

At that time this area was a hilly, rough, undeveloped portion of the campus and was dissected by two small arroyos. When the house was first built there were only two lemon trees and one orange tree on the grounds, and it was an interesting task to start the planting of a garden and especially to prevent erosion on the south slopes of the arroyo.

I learned that a rather large area at UCD was to have its plantings removed to make room for a new building on that campus. With permission from the proper authorities, I sent a truck and Dr. Vasek, a botanist in our Life Sciences Division, over to rescue as many of the plants as possible. He brought back twenty-two liquid amber trees, some olive trees, azaleas, the Dodonaea for the west boundary hedge, and so forth. He also found a young wing nut tree for the planting area on the back patio, which delighted us for we had seen the lovely wing nut tree in the back lawn of the Chancellor's residence at Davis. A member of the CES faculty gave us an elm which had come from the White House grounds. The Lockharts brought us several palm trees from their gardens.

Evelyn's first caller after we moved into the house was Mrs. A.B. West (wife of the president of Cal Electric) who brought a rose cutting from her own garden -- one which had been carried out of France by her Huguenot ancestors when they fled from their home to Pennsylvania. Subsequent cuttings had followed the family westward to California. Regent Boyd gave us many palm trees from his Palm Desert Deep Canyon premises. Another friend provided Monterey pines for the arroyo. Eucalyptus trees were planted there, too.

Evelyn and the gardener, Randy Anderson, crawled all along the ledges of the arroyo, putting out succulents and cacti garnered from our own collection and from friends, both in Riverside and elsewhere. A godchild gave us a magnolia tree. Bill Bitters started the Meyer lemon espaliered to the wall in front of the house. Randy espaliered the Pyracanthus to the inside of that wall. Dr. James Leslie planted one of his prize peach trees. A local Rose Association gave us some 150 roses; a friend at the Station started a cutting garden, especially strong on the beautiful African daisies he had hybridized.

Spieth: The block long hedge of bottle brush on the north side was set out in gallon containers; now they are some twelve to fifteen feet high and a beautiful sight.

Mr. Fred Whiting, head of the campus gardeners, would come by once or twice a week to take Evelyn in his big truck to roam the countryside in a search for native plants. Clearly many friends and associates helped in changing the barren grounds and arroyo into a garden.

Brienes: Can you describe the house and its interior?

Spieth: Oh well, it is basically a house small enough to be a home but large enough to take care of large groups that come to a chancellor's residence. There are ten rooms in the house if one includes the utility room plus an entrance foyer. The living room, dining room, and kitchen are large; the study and four bedrooms are of more modest dimensions. Upstairs there is a pleasant size "lounge" which could and still does serve as an additional bedroom or for meetings or social occasions. It often has served as a useful workshop.

Perhaps the kitchen consumed the most time in its planning. I believe Evelyn worked on its design for almost three years. Because the campus at that time did not have adequate food service, and because it was expensive to use the Mission Inn or other off-campus places, it seemed wise to have a kitchen where a corps of cooks, waitresses and waiters could prepare and serve groups of people at dinner, receptions, or meetings without undue confusion. It was also planned so that a meal for two or three persons could be prepared without undue running from pillar to post. With the present-day development of campus food services, meals can now be prepared elsewhere and brought to the house on steam trays; thus the present Chancellor doesn't necessarily need the set-up we found so useful. But I must say that the kitchen was a gay and festive place many times in the home cooking and serving done there.

Brienes: I am curious to know about the entertaining duties of a chancellor. How often did you entertain?

Spieth: Of course it varied both qualitatively and quantitatively from what I believe occurs on a large and mature campus, but all campuses are visited by a large number of distinguished people. On the large campuses the chancellor does not and cannot entertain every such visitor. At UCR, because of its small size and intimacy, it was automatically expected that a distinguished



The Chancellor starts the ballgame at UCR

Spieth: visitor would be entertained by the Chancellor, including lodging in many instances. We often had student, faculty, and alumni groups who needed a place to meet. The Symphony Association, Breakfast Forum, AAUW and other local groups often met at the house. State-wide officers and faculty met and sometimes stayed with us. It was always a delight to have the Sprouls, Kerrs, Wellmans, and individuals such as Calvin, Teller, and Stern, for informal discussions of mutual problems or of their own studies.

And of course we always had a reception for the seniors and their families on Commencement Day, followed in the evening by a dinner for the speaker and those who had been on the platform at Commencement exercises. When the state-wide Cal Club met at UCR, we had some 250 students from all over the state gather for meetings and informal discussions. And so on and on.

At some periods the flow of guests seemed to be continuous, but then there would be pauses (mainly during vacations or examination periods) when Evelyn could catch her breath, so to speak. And so could I.

Brienes: Were you provided help?

Spieth: We had a housekeeper, Ruth Elkins, who lived in Riverside and came to the house during the week days. She worked hard and competently, and we came to consider her a close personal friend. She is one whom we always try to see at least briefly whenever we return to Riverside.

When we had large groups coming, we could call for outside help from Food Services who could send up a cook and waitresses. At first it was necessary for Evelyn to spend time training them in serving meals in a home rather than in the cafeteria style to which they were accustomed. Often we employed students when more assistance was necessary. Mr. Chermak, who headed Food Services for many years, usually came to the house once a week to sit down with Evelyn and plan for the coming week's events, deciding on menus, how much help would be needed, and so on. He had been a Colonel in the Air Force at March Air Base where he had been in charge of food services. It was a highlight of the week when he knew a flyer would be returning from Alaska and who would kindly bring back Alaska king crab for us.

Brienes: Are you aware of the fact that you and Evelyn have a great reputation as hosts?

Spieth: If that is so, Evelyn deserves full credit.

One of the reasons that the Chancellor's home was so important at that particular stage in the development of the campus was, as I have said before, because we had no student union and food service was quite primitive and limited. There just was no place for many types of meetings and entertainment activities. By then the Mission Inn was in serious trouble and was decreasing in its usefulness as far as the campus was concerned. It was also an expensive place to use.

Brienes: Just one last question about your entertaining there. There must have been passing through Riverside in the years you were there some exceptional people that you had a chance to take into your home. Are there a few of these people who particularly stick out in your mind?

Spieth: Oh yes, there were. One was a friend of mine from New York days: the famous and delightful geneticist and evolutionist Theodosius Dobzhansky, and our close friends Ernst and Gretel Mayr. Ernst along with Dobzhansky revolutionized evolutionary studies during this century. There were C.P. Snow and his wife Pamela Johnson; Louis Leakey, the anthropologist who studied human evolution in Africa and who spent one full spring on our campus.

Others who come to mind quickly were the London economist C. Northcote Parkinson who invented Parkinson's Law; the grandson of Charles Darwin, also named Charles Darwin, who wrote a book entitled "The Next Million Years" which has never received the credit due it. He and his wife spent a week with me. There was Katherine Ann Porter, who was finishing writing "Ship of Fools" while on the UCR campus for a semester. Arthur Adams, former President of the University of New Hampshire and chairman of the American Council on Education, and his delightful wife Irene spent most of a year on campus. Incidentally, Arthur had headed up the education program for the Navy during World War II. There were many, many others, all distinguished in one field or another.

Brienes: Quite an amazing list of intellectuals for a small campus.

Spieth: Various conferences held on campus brought interesting people. One year soil scientists from all around the world, after meetings on the University of Wisconsin campus, came on to UCR and gathered for an informal session at the house. Included was a group of Russians complete with their "chaperon" to keep them together and from talking too much to those from

- Spieth: other nations. We deliberately provided a generous bar and our local soil scientists were able as the day wore on to separate the Russian scientists from the NKVD chap, and delightedly reported afterwards that this had enabled them, after two weeks of effort, to learn something of Russian scientific efforts in soil conservation.
- Brienes: We have spent time on administration, faculty, and other matters, but not about the students.
- Spieth: That's right and we should talk about them, for they are the basic reason for the university's existence.
- Brienes: How about research?
- Spieth: Research can, of course, be conducted at a research institute without students, but it should be noted that graduate students cannot be adequately prepared without learning how to conduct research. Thus a university campus necessarily involves research.
- Brienes: Very well, let's turn to the UCR students.
- Spieth: We opened the College not at the beginning of a fall semester but rather in February of 1954, with 126 students enrolled. They wrote their names in freshly poured cement in the courtyard of the dance and fencing studio which is a part of the gymnasium. They were mostly from the surrounding area and could be roughly divided into three groups. First, probably the majority enrolled because they were attracted to the small campus ideal. A second group planned to use the campus as a junior college; that is, they planned to attend UCR for one or two years and then transfer to one of the large campuses of the University, especially Berkeley. Finally there were a few older individuals who had not, for one reason or another, finished their college degrees when younger and who wished to complete their college requirements. Interestingly, Philip Boyd who had not been able to finish his senior year at Wabash College in Indiana because of illness, did, during the middle 50's enroll and complete a sufficient number of courses which Wabash accepted and he was thus able to graduate.

This pattern of student mix continued through the 1950's and into the 60's.

The young faculty were both eager and rigorous, and the courses offered were difficult. We soon began to receive com-

Spieth: complaints about the heavy work load the students faced and especially the large number of low grades they received. These complaints came from some of the students but mostly from parents and principals of high schools. As chairman of the Life Sciences, I had mixed feelings about the complaints. I observed that the young faculty all over the campus were pushing the students hard but the curriculum did not seem excessive to me.

As an example, when I prepared the tentative curriculum for Life Sciences, I started to include a year of calculus as a prerequisite for the major. This, of course, was what pertained at CCNY and I felt that any biologist of the 1950s should know calculus. Pierce advised against it, saying that from his knowledge of the Pomona students, a rather elite group academically, he believed the high school graduates from California who planned to enter the biological sciences were not prepared for calculus. He was correct, for I soon found that the students from California high schools entered UCR with grades comparable to those of CCNY entrants but they were on the average less well prepared for university level courses. We also observed that a selection process resulted and within a few years only superior students were enrolling at UCR. Such a pattern once established tends to persist, and I am convinced that academically the UCR student body is still today superior to those of some other campuses.

After I became Chancellor, I talked with several high school principals about the fact that our student body was growing more slowly than anticipated. One of them was frank and said, "We urge our seniors who have B and A- records not to enroll at UCR. If they do, they get relatively low grades and then their parents berate the high school for not having properly prepared the students for university level work".

Neither was I pleased with a remark that Kerr made on one of his periodic visits when he accused the assembled student body of being "apathetic", because they did not seem to be involved in a large number of extracurricular activities. The unfairness of this remark is shown by the distinguished careers that a majority of our graduates have achieved.

I have always assumed that Clark meant to be encouraging rather than derogatory, but the students had, with much encouragement from Deans Broadbent and Davis and faculty members, made a truly strenuous effort to develop extracurricular activities and "quick traditions".

Spieth: They had organized an Associated Student Union, a newspaper, an annual, specialized groups built around special interests such as drama, art, the dance, music, debate, government, athletics (both intramural and intercollegiate), sports (Tim Prout started the first club -- the Ski Club), languages, science, and so on.

One of the first things they had done was to hold an election where they voted overwhelmingly to call themselves "The Highlanders" (since the campus was located a thousand feet or so up the slopes of the Box Springs Mountains). They dressed the California Bear in kilts and understandably called their annual The Tartan and their newspaper The Highlander. Their first band was a one-person bagpiper. Coeds wore Scottish costumes and did Scottish reels and sword dances between halves at games and elsewhere. As time went on, a hostess group was formed which called itself "The Tam-o-Shanters".

My point is that our students were first of all scholars, but they did not lack zest or inventiveness in developing extracurricular activities. They worked hard and played hard but were not attempting to reform the world before they had gained an insight and wisdom about society.

I might add that it is my observation that students who are political activists during their college years typically end up as reactionary adults. In comparison, men like Jefferson, Darwin, Einstein and Wilson were not activists during their college years but they did reform and change their societies as adults.

Brienes: That's an interesting observation. How did the students feel about being a part of a small college and which ones engaged in student government?

Spieth: Most of the students who chose UCR became ardent disciples of the small college theme, especially those who were majoring in the humanities and the social sciences. A large number majored in the sciences but mostly they were too busy and dedicated to their studies to become involved in student politics. As a result student government was mostly in the hands of non-science majors.

Each year a High School Day was held and numerous high school seniors planning to enter college the next fall visited the campus. In the morning a general assembly was held at which time the Deans, heads of Divisions, and the president of

Spieth: the Associated Students told the visitors about UCR. The attitude of many of the UCR students was expressed one year by a young, articulate president of the Associated Students. His speech to the group was, as I remember, approximately the following:

"Good morning. I am supposed to tell you about UCR. We have here an excellent small college and we are determined to keep it that way. We don't want you here; enroll in some other institution. Thank you."

This young man was expressing in blunt words the feelings of a considerable number of the faculty. I understood and had sympathy with this attitude, but, as I have said earlier, I perceived what I believed to be external forces that were not compatible with such desires. Some of the displeasure was focussed on me, especially since I was trying to induce, or perhaps I should say pressure, the faculty and the Academic Senate to take steps that would perhaps allow us to control at least partially our destiny when we became a general campus. My hope was that eventually UCR would evolve into a campus that would be roughly similar to Princeton in quality and in size.

In early 1959 the Regents decided that Riverside should become a general campus. In 1960 undergraduate instruction was begun in a newly formed College of Agriculture. A Graduate Division involving both Letters and Science and Agriculture was formed in 1961. These developments caused some trauma but only a few faculty members left despite the fact that jobs were easy to come by at that period in time.

Brienes: Your years as Chancellor span the time during which the student population attitudes started shifting and political activism became more of a style, at least on some of the University of California campuses. I am interested to know what effect the events that were starting up at Berkeley were having down at Riverside. What I'd like is just to open up the discussion of what you were experiencing at Riverside.

Spieth: The one thing that was clear was that a small number of students became active in the early sixties. How the liaison was set up, I do not know, but the small group of activists at Riverside quickly developed a close relationship with the student activists at Berkeley. There was an organization formed which called itself "Declare". Obviously inter-campus consultation occurred between the Berkeley students who belong to "Slate" and the "Declare" students at Riverside.

Brienes: Was "Declare" an acronym -- or did it stand for something?

Spieth: I do not know why it was chosen, but that was the name. "Declare" set about to test the question of the prohibition of Communist speakers on campus. In fact, Riverside and UCLA were chosen as the test campuses. Because of University regulations, I had to deny the students the right to invite Mrs. Haley, who was the leader of the Communist Party in California, to speak on campus -- and Murphy did the same thing at UCLA. This then resulted eventually in a court case which the University essentially lost. In time Mrs. Haley was invited to speak on the campus and she did so. I also remember Kerr issued new regulations for student activities and certain financial responsibilities, as a result of which my office was picketed by a few students.

Brienes: Financial responsibility for what?

Spieth: Student monies and how they should be accounted for. There were a small number of students on the Riverside campus who kept step with the activists on the Berkeley campus. I am sure the same thing was going on at UCLA. This did not happen at Davis or Santa Barbara.

Brienes: Can you specify that period more accurately? You said that was when the Slate Party caucus was active at Berkeley. But that preceded the Mario Savio scuttle?

Spieth: Oh yes. This was in the early sixties -- about 1962.

Brienes: Now the case brought on behalf of Mrs. Haley was brought by whom? Was it brought by the students on your campus? on behalf of the students?

Spieth: It was really handled by the ACLU.

Brienes: I see. Did someone ask the ACLU to get involved? Was it anybody on campus that was involved in getting the ACLU interested?

Spieth: Yes. It was Declare that officially sought the aid of ACLU.

Brienes: Now, it was at your discretion that Communists were barred from speaking? Was it University-wide policy?

Spieth: It was University-wide policy at that time, and there was nothing that I could do except to respond as I did.

Brienes: May I ask you what your personal view was on that at the time?

Spieth: My personal views?

Brienes: Yes.

Spieth: I have no objections to students listening to Communists. I consider any Communist a liar in the sense that he is committed to a secular religion which is totalitarian in nature and in which he had been thoroughly indoctrinated before he could become a Communist. Like all fundamentalists, he cannot accept any other point of view. Consequently, as far as I am concerned, the Communist is just as dishonest as any Nazi was -- or any other totalitarian. I see no reason why the University should offer them a special forum for speaking, just as today I would still personally object to having a member of the Ku Klux Klan or the American Nazi Party speak on campus. I don't think this is a part of what the University is about. Having dealt personally with Communists and Nazis for a number of years in New York, I came to the conclusion that they are outside the pale, as far as I am concerned.

Brienes: So when you invoked the ban, you did it out of conviction as well as.....

Spieth: I did it out of conviction as well as out of responsibility. I can put it another way. I was not averse to invoking the ban although I did not go out of my way to do so, and I did not do it until it was forced upon me.

Brienes: So when this came before you, you couldn't avoid it?

Spieth: I could not avoid it.

Brienes: Was this the opening act in some difficulties with students in the era of student unrest?

Spieth: No, I think not. It was just part of the ongoing program. The students said they were citizens of the world as well as students. And this was quite true. As students, however, they were being supported by all of the people of the state of California and not by themselves alone. Now if they decided to hire a hall with their own funds and listen to any person, I would have no objection. This is a free country and its citizens should be allowed to do that. But to utilize the dollars and cents of all of the people and to use the facilities of the citizens' University is another matter.

Brienes: Well, barring the Communists must have led to a confrontation on some level with you on the part of some of these students. Didn't they come to see you about it?

Spieth: They came to see me to ask that I sign approval of their request. I said "No" -- and they were polite. And then we went through legal channels. I am sure that the whole affair was pre-arranged, decided upon, and thought out before it was done.

Brienes: But at least on this issue, you didn't face any unrest of the sort that ripped apart Berkeley later?

Spieth: Not serious, no.

Brienes: Did you ever have any incidents on the campus that at least approached what happened at Berkeley?

Spieth: Well, no, there were no student confrontations of that sort.

Brienes: How do you account for that?

Spieth: There weren't serious confrontations on any of the campuses until the fall of 1964, of course. If I had stayed on as Chancellor, I am sure there would have been some confrontations during '64. In the spring of '64, President Kerr had suggested that I stay on another year. Had I done so, there could quite possibly have been confrontations. The small group of activists did, I am sure, consider me a reactionary person.

Brienes: The Declare group was your organized radical group.....

Spieth: Well, it was an organized group.

Brienes: You don't think it was a radical group?

Spieth: I do not know if you would call it a radical group, but I am sure there were some radical students in it. You could say that Declare was a group against the Establishment -- a different sort of thing. I can remember that many years ago as an undergraduate, there were a number of us on campus who objected in our own minds to some of the things that went on on campus, and we used to talk about them. We didn't have a student organization, but probably if we had had one I would have been one of those who would have been bitterly complaining about some things I didn't like. That would not have made me a radical necessarily but, rather, a dissenter.

Brienes: I will amend my statement. Declare would have been the organized dissenters on campus. Did Declare become organized after you became Chancellor?

Spieth: Oh yes, it was organized after Slate was organized at Berkeley.

Brienes: Now could you tell me about the origins of Declare? What caused it to be created? -- a campus issue as at Berkeley?

Spieth: I do not know that it was created by any campus issue at Riverside. I think it was created by state-wide issues. Slate had been formed at Berkeley and I think our students, either because they had friends there or because Berkeley students in Slate had perhaps come to Riverside to talk to them, decided to form a similar organization. I do not know the actual roots of Declare.

Brienes: Slate at Berkeley was concerned with organizing themselves politically to take over the executive committee of the Associated Students and they complained there very loudly of not being allowed to control their own affairs on the campus and having to get approval from the administration at all times. What were the issues that came up for the dissenters in Declare on the Riverside campus? Were they similar?

Spieth: There really were no issues that came up with Declare except for the fact that they supported many of the ideas of Slate.

Brienes: But you had a student government at Riverside?

Spieth: Oh yes, we had a student government at Riverside.

Brienes: And they were not involved in trying through elections to take over?

Spieth: They may have been. In general, Declare did not control the student government.

Brienes: Generally speaking, were the people who were elected to the student government dissenters?

Spieth: Some of them were and some were not.

Brienes: Was there an organized student opposition to the dissenters in Declare?

Spieth: No. No overt organization. Actually, I did not plan to talk about the intricacies of this. Tom Broadbent who was Dean of Students at that time could, I am sure, tell you more details about the matter than I can.

Brienes: It sounds then that at least in the time you were there you had a minimum problem with the student dissent.

Spieth: A minimum of overt dissent. There may have been something under the surface that I do not know about.

Brienes: Were you sensing at that time bad days were to come? Could you tell?

Spieth: Yes, of this I was sure.

Brienes: What were the signs that you were seeing?

Spieth: Clearly there was constant pressure on the part of a small group to allow the student body to do their own thing without assuming any responsibility for the reputation, image, or purposes of the University. The major problems at Berkeley, of course, did not break out until the fall of '64 after I had left the chancellorship.

To sum up, the UCR students were for a uniquely large part in college to learn. They were scholars in the best sense of the word and they were very proud of being a part of a campus devoted to scholarship. They worked hard and they played hard. Activism in the political sense was, I feel sure, limited to a small group and existed mostly because of encouragement from outsiders such as Slate at UCB. The others were waiting to acquire an education before getting involved in political reforms.

Brienes: We have left out your own career in terms of your own professional activities as a zoologist during the Riverside years. We haven't discussed that.

Spieth: As far as my research is concerned, when I first went there I managed to get a small amount done.

Brienes: My understanding is that those were years when you did less research than probably at any other time in your career.

Spieth: When I became Provost and then Chancellor, I did not have time for research.

Brienes: Yes. That was for about eight years or so. Had you made any attempts to keep up with the literature? Were you able to do that at all?

- Spieth: I tried, but I simply had no time for it or for research. I did not have a research technician to take care of living organisms. Indeed, when working with living organisms, one has to do it personally or at least one must be in the lab almost every day to see how the creatures are doing, and that means year in and year out, usually seven days a week.
- Brienes: Impossible.
- Spieth: Well, that is exactly what I do here and when I go to Hawaii; I work in the lab or in the field seven days a week.
- Brienes: When did you start work in Hawaii?
- Spieth: In the spring of 1963, Wilson Stone at the University of Texas telephoned me and said: "Well, the grant for the Hawaiian project is funded; we'll start this summer". I replied that I certainly wanted to be in on it.

The background for this research project goes back to 1949-50 when I had taken a sabbatical at Texas. During that year Stone and I became close personal friends. He was a young professor in the Department of Zoology and also head of the Genetics Research Institute. When I went to Riverside in '53 I was on an eleven-month appointment, so I was not able to get back to Texas to pursue my investigations. During the 1949-50 year Stone and I had agreed that sooner or later, and the sooner the better, we would try to tackle the Hawaiian Drosophila which are unique among the world's Drosophila. A number of investigators had made some preliminary studies as far as identifying the species were concerned. We knew there were a great many species in Hawaii, and we also knew that they were strikingly different physically and perhaps behaviorally from those of the rest of the world. In the late '40s, J.T. Patterson, who was the driving force at Texas, had made Texas the center for the study of the biology of Drosophila worldwide, and he had placed one of his graduate students, Gordon Mainland, on the faculty at the University of Hawaii. Mainland had been unsuccessful in rearing creatures in the laboratory just as all other investigators had been. So we knew of the serious difficulty in rearing the flies. Stone and I were eager to have an opportunity to work on the problem.

Stone had become involved in the biological work connected with the testing of atom and hydrogen bombs, and he was collecting Drosophila from various places in the Pacific, and particularly around the area where bombs had been exploded. The atolls and islands had Drosophila on them. Since we knew so much about

Spieth: the chromosomes and genetics of these species, he knew we had a background against which we could check what the atomic blasts were doing to living creatures there. Those were busy years for him, while I went to Riverside and was occupied first in the development of the Life Sciences Division and then became the chief administrative officer.

Stone had finally finished his work in the South Pacific, and he went to the National Science Foundation for a grant to start the Hawaiian Drosophila Project. Cooperating with him on this proposal was Elmo Hardy of the University of Hawaii who had been studying the systematics of the Hawaiian Drosophila and was ready to publish a large monograph.

When Stone telephoned me in the spring of '63 to say there was now money for the project, I replied: "Well, I have not yet taken my yearly month's vacation since coming to Riverside but I will take the full month this year and come to Hawaii".

Perhaps I should explain that Stone, as a grade school student, had been a classmate of Lyndon Johnson, and, in fact, they were close friends. The two men had some comparable traits. Both men were brilliant; Stone was one of the most analytical thinkers I have ever known. Like Johnson, Stone knew the Texas language not only as it is spoken in polite company but also as it is spoken amongst men.

Brienes: And they are two languages! [laughter]

Spieth: That day he replied to me over the telephone in the language that is spoken amongst men about what a month's work would be worth! [laughter]

Brienes: And it is not the language used in oral memoirs, is it?

Spieth: No, it is not. I remember that I went home that evening and said to Evelyn: "Wilson called me today to say that we're ready to work on the Hawaiian problem. We have waited a long time for the funding, but now it is here. Is there any reason why I should remain as Chancellor? All I have to do is resign. Do you see any reason why I shouldn't go back to teaching and research".

And Evelyn said, "No". I sat down that night and wrote out my resignation to Kerr.

Brienes: So it was your interest in getting back into your field.....

Spieth: It was an opportunity I had waited for many years to become a reality. I must confess that at the same time I had the nagging underlying feeling that the life of an administrator was going to become more difficult -- for a variety of reasons, but particularly because of the psychology that was flowing through student bodies. I did feel that probably I could handle it, but I didn't know whether I wanted to go through the stress that it would take.

Besides, I had another item, a feeling, in my mind. A friend in Canada, Jeff Andrews, who had become a most important figure in the Canadian educational system, and I had talked several times about the optimum duration for administrative work. He felt that chief campus administrators should not stay in position for more than five or six years because of the simple fact that they had, in a sense, "spent" their ideas. That is to say, each individual has certain specific strengths that he can contribute to an organization and once he has gotten those in operation, it is time for somebody else with a new set of ideas, a new cast or attitude of mind, to take over. Perhaps if we can take a look at what had changed during the period I had been Provost and Chancellor at UCR, it will show why I believed I had accomplished most of my ideas.

Brienes: That's fine.

Spieth: Let's take the various areas in the order that we talked about earlier. Some tables or lists can best be used to illustrate the differences between 1956 and 1964.

First, the administrative staff. You remember the 1956 list of eight people plus the academic administrator we talked about. The 1964 list was as follows:

Robert L. Metcalf, Vice-Chancellor Academic Affairs  
 William J. Wigglesworth, Vice-Chancellor Business and Finance  
 Alfred M. Boyce, Dean of the College of Agriculture  
 Thomas P. Jenkin, Dean of the College of Letters and Science  
 Ralph March, Dean of the Graduate Division  
 Don Weirk, Assistant to the Chancellor  
 Raymond Howes, Assistant to the Chancellor  
 H. Edward Simmons, Dean of Men  
 Norman M. Better, Acting Dean of Students  
 Loda Mae Davis, Dean of Women  
 Frederick Veitch, Student Health Director  
 Ronald Roston, Counseling Center Manager

Spieth: Max Ulom, International Student Advisor  
 Edwin Coman, Librarian  
 Frances Gurl, Registrar  
 Wilma Holiday, Assistant Registrar  
 Charles Bond, Placement Officer  
 Warren Schoonover, Accounting Officer  
 James Greenfield, Director of Relations with Schools  
 Albert Haight, Principal Architect  
 Dean Boen, Superintendent of Buildings and Grounds  
 Pat Murphy, Purchasing Agent  
 James Harley, Head, University Extension  
 Sue Kelley, Personnel Manager  
 John Osborne, Police Chief

There had been a tripling in personnel; the Chancellor now had a couple of assistants as well as two Vice-Chancellors, all highly effective in their respective roles. These increases occurred mostly after we had become a general campus, but not overnight. Nisbet who had been Dean in 1956 later became Vice-Chancellor but had returned to teaching by 1964. There had been other changes.

The physical plant had grown enormously. All of the buildings that constitute the present campus except one had been approved by the University and the State. Most of them had been constructed and the remainder were in the various stages of development. Following is a list of the buildings constructed between 1958 and 1965.

<u>Building</u>	<u>Year Completed</u>
Administration Building	
Agrichemicals and Environment Pollution Laboratories	1965
Agricultural Extension Facility	1964
Bell and Clock Tower	1965
Boyden Entomological Laboratory	1961
Corporation Yard	1960
Custodial and Grounds Department Headquarters	1965
Entomology Building Addition	1960
Farm Group	1960
Health Service Building	1961
Heating Plant and Shops Addition	1959
Humanities Building	1963
Insectary Building Addition	1964
Library Addition	1963
Life Science Building, Unit 1	1959
Physical Sciences, Unit 2	1961

Spieth:	Physical Sciences, Unit 3	1965
	Physical Sciences, Unit 4	1965
	Purchasing Department Facility	1963
	Residence Halls, Units 1, 2 and 3	1959
	Residence Hall, Unit 4	1963
	Stored Products Insect Building	1958
	Chancellor's Residence ("University House")	1959

In addition, considerable land area had been added to the campus. A large tract of agricultural land was acquired several miles from the campus in the area where the Perris Reservoir is located. Importantly we acquired 3600 acres in Deep Canyon near Palm Desert. This had been developed into the Boyd Desert Research Center. The Boyds owned three sections of this area and the adjacent sections were owned by the Federal Bureau of Land Management. Philip Boyd was and still is deeply interested in the desert fauna and flora. Through his interest and urging we were able to purchase the Federal land at a modest cost and the Boyds gave the University their sections. This Center now has become world famous as a desert research site.

The Boyds were quite generous in many ways to the campus. One day Philip came to my office and rather quietly asked me if I thought the campus would be willing to accept sufficient funds to build a bell tower. I need not tell you that we accepted the offer. The Boyd Bell Tower was completed in 1965 and contains a full and fine carillon of bells. The Boyds sent William Reynolds, Professor of Music, to France to select these magnificent bells. For many years their gift was an official secret and only in 1978 was the campus able properly and publicly to thank the Boyds. It was an affair in which I was delighted to participate.

Brienes: The list of buildings you have given is considerable.

Spieth: I listed only the buildings that were completed through 1965. A major building which was completed later was the much needed Student Center. The lack of such a building was a major deficiency in my mind. Gordon Watkins, with his charismatic charm, had induced the citizens and faculty to provide sufficient funds to build an off-campus building at the edge of the campus. It was designed and built as an interdenominational religious center. In a sense it also functioned secondarily as an inadequate student center, and was sometimes called the "living room" of the campus. State funds could not be used for the construction of student centers and I despaired of ever getting one.

Spieth: Suddenly the campus received a rather large gift of money from the estate of a revered Riverside citizen, Charles Brouse. The income from these funds could be used in any manner that the campus desired. Careful study indicated that the interest from the funds added to student funds would be sufficient to allow us to amortize the first unit of a Student Center. To my surprise, Clark Kerr objected, but I was adamant and he eventually reluctantly gave us permission to proceed.

Not only has this building served a vital role in campus life but it has also been appreciated and used by the citizens of Riverside.

Amongst our friends in town, Thomas and Marian Gore were deeply interested in international relations. After Tom's death Marian had a remarkable Riverside artist, Florinda Leighton, design and execute a large mural dedicated to the memory of Thomas E. Gore. It is enamel fired on copper, extends across the length of one wall in the International Lounge of the Student Union, and is most appropriately entitled "The Bridge of Understanding".

Brienes: I have been informed that you paid great attention to the building program.

Spieth: Yes, I did. My reason was a simple one. A university campus can change administrators at all levels whenever it is deemed necessary; it can also change its educational policy, although this is a bit more difficult than changing administrators. But a campus has to live with its physical plant almost indefinitely. I therefore early decided that I would ride close herd, so to speak, on the construction of new buildings and other physical developments.

Brienes: Yes In the University of California, as you may know, in addition to the Campus Architect, the Regents appoint a supervising architect and a supervising landscape architect. When I became Provost, Allison and Rible were the supervising architects but their contract expired and George Vernon Russell was appointed to replace them. Somewhat later Patricia Shellhorn was designated landscape architect.

Spieth: I have scant respect for many architects whom I have known. Most of them knew or cared little about the uses that the interiors of a building would be subjected to during the years of its existence. They also paid scant attention to future maintenance costs, noise control, or flexibility for modification as use-needs change, etc. Rather they were mostly concerned with

Spieth: building an exterior that would be a monument for their egos, usually with disregard to how the building they were planning would fit with neighboring buildings already in existence.

George Vernon Russell and Pat Shellhorn exhibited none of these disabilities and I can say with conviction that I consider them to be outstanding practitioners of their profession.

Of course I should add that the Regents designated for each building a particular project architect. It was the responsibility of Russell and Shellhorn to convince the project architect to prepare his blueprints so that the building would not only be functional for its particular use but also would fit in with the adjoining buildings as well as with the general tone of the campus. I supported them unremittingly.

Spieth: Yes. We early decided that lawns should be kept at a minimum and that we should have shady, cool nooks with an abundance of trees. We gave special attention to insuring that the grassy areas appear to be larger than they are. Sometimes the project architects were stubborn, but we always won our point.

Just recently it has been reported to me that an accreditation team inspected the Riverside campus this year (1978). Such teams consist of faculty and administrators from other universities. Periodically, usually every ten years, such a team evaluates the educational quality and progress of a campus. This particular team was composed mostly of individuals from a number of eastern universities. When they had completed their inspection, they reported to the UCR administrators that they believed the UCR campus was "the most human-oriented and beautiful campus" that they had ever visited.

Brienes: You should have been happy!

Spieth: I was.

Brienes: What was the College of Letters and Science like in 1964?

Spieth: As a result of becoming a general campus, departments were established in 1963. Life Sciences remained as a single unit and I was pleased that it did, but the other three divisions were dissolved and replaced by departments. In 1964 the two colleges, Letters and Science and Agriculture, contained a total of twenty-eight departments.

The pattern had been set, so I knew the campus could go on well without me. And I thought life would be in many ways

Spieth: simpler personally, and I would be doing this one thing I had planned and hoped to do for a decade and a half! I also knew that I had been out of research and teaching long enough; if I didn't get back very quickly, I couldn't get back again. If I had waited another four or five years, I was sure that I would have been so far behind (I really didn't yet realize how far behind I was) that I couldn't pick up the pieces.

Brienes: What advice did you get from the Provost?  
 Spieth: So I sent in my resignation, which Kerr accepted and took to the Regents, who protested: "He can't go this year; we can't get a replacement by July". This was in the early spring.

Brienes: Of '63?

Spieth: Yes. So I agreed to stay for another year.

I did go to Hawaii the summer of '63 for my vacation, the first time I had taken that full month in ten years, and I spent the full month in the lab, working. I got into the field some, but I spent most of my time working on the specimens collected by other individuals. When I returned to Riverside, I had to forget about Drosophila until the next year after I was finished with being Chancellor and could go on sabbatical. I spent the first half of my sabbatical in Hawaii and the second half at the University of Texas.

Brienes: That would be --?

Spieth: The year of 1964-65. It was an extremely profitable year. Scientifically it was great. Stone and I picked up our friendship just where we'd left off fifteen years before and I accomplished a great deal of research. It was a very, very pleasant year.

Brienes: Before we go on let's retract to the years when you were Chancellor. You obviously became acquainted with the chief campus officers of the other campuses. Would you (I don't ask you if you want to) give me your personal vignettes of these individuals?

Spieth: When I was appointed Provost, Stanley Freeborn was Provost of the Davis campus. I found him to be a thoughtful, kindly, and competent person. He invited the Spieths to Davis almost immediately after I had been appointed. He and his friendly wife thoughtfully gave us advice about our new responsibilities and the problems that we would encounter.

Brienes: Would it be true to say that Davis and Riverside, in terms of their development, were experiencing similar problems at that time?

Spieth: Not exactly, but both were small campuses, both originally had been devoted only to agriculture, and both had just recently become authorized to develop colleges of Letters and Science.

Brienes: What type of sage advice did you get from the Freeborns?

Spieth: Freeborn had been a member of the Department of Entomology at Berkeley before he came to Davis. He was able to enlighten me about the personalities and responsibilities of various administrators at Berkeley and State-wide that I would be meeting and working with. He also knew about the types of problems that a campus administrator faces in day to day matters. During my twenty-one years at The City College of New York, I had adamantly refused to accept any administrative responsibilities in the Department of Biology or at the campus-wide level. My administrative experience had thus been restricted to the three years as chairman of Life Sciences at Riverside. Being both inexperienced and naive as an administrator I was happy to receive any and all advice.

It was not until Clark Kerr became President (1958) that the chancellors met regularly. Actually, at the time when I was appointed Provost in 1956, I had not personally met any one of the chancellors or provosts of the other campuses. Since Freeborn was an entomologist, I was acquainted with his personal background. During the period that Sproul was President, I did become casually acquainted with Clark Kerr at Berkeley, J. Harold Williams at Santa Barbara, and Raymond B. Allen at UCLA.

In July, 1957, the Regents met at Arrowhead in the San Bernardino mountains and were presented with detailed academic plans for the Berkeley and UCLA campuses. Kerr and Allen made their respective presentations. Allen's contribution was perhaps adequate, but diffuse, and clearly showed that it had not been diligently and rigorously prepared. Kerr's was just the opposite. It was elegantly presented and every "t" had been crossed. Sproul was to retire the following year and it was bruited about that perhaps the Regents were considering Allen as Sproul's successor. Be that as it may, I was convinced at the end of the meetings that Kerr was destined to be the next President of the University of California.

I need not comment on his high competence as a scholar and administrator. He is a devoted workaholic, gifted with

Spieth: seemingly inexhaustible energy and extraordinary intelligence. His field of scholarship is industrial relations and out of his experiences in this area, plus perhaps his personal attributes, he basically operated on the assumption that any vexing and seemingly intractable problem could eventually be solved by compromise. Perhaps so, but I believe that there arise at least infrequently situations in human affairs that cannot be solved by compromise; attempts to compromise in such cases result in disaster for all concerned.

Raymond B. Allen of UCLA I found to be a pleasant person, but our problems were so different that we had little in common. When he resigned in 1959 he was succeeded for one year by Vern Knudsen. Knudsen was a thoughtful, kindly person and a great gentleman in any man's language, and one whom I always enjoyed. In 1960 Franklin P. Murphy became the UCLA Chancellor. For many years UCLA had been called the southern branch of the University, and for a period President Sproul had moved his office from Berkeley to UCLA for several months each year. The UCLA faculty, alumni, and students felt, rightly or wrongly, that they were sometimes treated as second class citizens within the University. Murphy is a dynamic and politically astute individual. He immediately set about erasing this image and was, I believe, eminently successful.

In May, 1959, the San Diego campus was changed from a specialized research institute, the Scripps Institution of Oceanography, into a general campus. During this period Roger Revelle was the Director of the campus. Revelle is an unique person, intellectually gifted. He was, in fact, one of the gifted students included in Terman's famous study. Revelle set out to make the San Diego campus one of the major graduate schools of the country. He had small interest in undergraduate programs.

Brienes: Just the mirror image of Riverside.

Spieth: Quite right. He sought to recruit faculty who had international reputations, members of the National Academy of Science and similar organizations. At the Regents' meeting in which the site and plans for the Medical School and associated hospital for the San Diego campus were considered, I noted that it was to be located in an area of the campus that would be difficult for the general public to reach. I remarked to Roger that prospective patients would have difficulty reaching that location. He replied, "That's fine; we want a research hospital rather than one that is serving the general public". Although Revelle left the University in 1964 to join the faculty at Harvard University, I think without question that he was able

Spieth: before he left to instill the kind of esprit de corps on the San Diego campus that he had hoped to achieve. Once such a pattern is established, it tends to persist.

A highlight that we shall always remember with delight was a Charter Day at San Diego when Eleanor Roosevelt was the speaker. That evening we had the privilege of dining with her in a small group of a dozen or so, with an opportunity to talk informally with this remarkable woman.

In 1959 Emil Mrak became Chancellor of the Davis campus and during the same year Samuel Gould was appointed Chancellor of Santa Barbara. At that time there were only six general campuses: Berkeley, UCLA, Davis, Santa Barbara, San Diego and Riverside -- with San Francisco as a specialized unit. Gould had been President of Antioch College in Yellow Springs, Ohio, and he quickly realized as did both Mrak and I that the three small campuses were somewhat at a disadvantage vis-a-vis the two large campuses. As members of a state-wide system, we had to conform to all the state-wide procedures and regulations. Our administrative staffs were, however, small and limited in comparison to those of the two large campuses.

Brienes: Was it a matter of not being wise to the ways of the bureaucracy?

Spieth: No, it was simply that we were spread too thin in a sense. For instance, one of our people would have to deal with a variety of matters that on the large campus would be attended to by several individuals, each a specialist in his own particular section or area. As a specific example, the Regents held their monthly meetings on the various campuses. They came once each year to the small campuses. At the large campuses there was sufficient administrative staff to take care of all of the details, especially the logistics involved in a Regents' meeting. When the Regents came to Riverside, essentially all other administrative duties were suspended for the week before and during their presence on the campus.

Gould was astute, articulate and imaginative, and he was determined to make Santa Barbara more visible both within the University and to the general public of California. Although he left the University in 1962, during the preceding three years the Santa Barbara campus grew and developed considerably. He contributed greatly in establishing the University-wide Education Abroad Program which was modeled on a similar program that existed at Antioch. The headquarters for the program were placed on the Santa Barbara campus where they are still located.

Spieth: Periodically Gould, Mrak and I met or communicated previous to the monthly meetings that President Kerr held with the Chancellors. These meetings occurred on the evening of the day preceding the Regents' meeting each month. Kerr would inform the Chancellors about matters that were to be on the Regents' agenda and also discuss with us other important University and campus matters.

I should not leave the impression that the small campuses were abused. President Kerr was always even-handed. Vice-President Wellman, one of the most intelligent and kindly individuals I have ever known, had been Vice-President of Agricultural Sciences from 1952-58 and therefore knew the problems of both Davis and Riverside especially well. In a sense, it was merely that the "striplings" were constantly in competition with the "big boys" for resources and recognition, both within and without the University.

Brienes: You have said little about Emil Mrak.

Spieth: I can truthfully say that Emil and I have been close friends since the first day we met, which was at his inauguration as Chancellor of the Davis campus. Energetic, intelligent, and by instinct a political animal in the best sense of that expression, it is my conviction that he was the most over-all successful and effective administrator of the various chancellors whom I knew. He understands the nature of scholarship and the role that administrators should play in enabling a university to achieve its goals.

When the student "uprisings" occurred during the 1960s, the Davis campus experienced few difficulties even though in close proximity to Berkeley and even though there were considerable contacts between students as well as faculty on the two campuses. The troubles at Berkeley could well have spilled over to Davis, but Mrak kept the lines of communication open between the students and the administration. When he felt it necessary, he could and did sternly say "no" to unwarranted and unacceptable demands. As a result of his astute leadership, Davis came through unscathed.

I am glad to add that Ivan Hinderaker, who succeeded me at UCR, was equally successful on this score.

Brienes: So far you have not said anything about the chancellors at Berkeley and San Francisco.

Spieth: John B. de C.M. Saunders was Provost of the San Francisco Medical School. Tall and handsome, he came from a Scottish family that

Spieth: had migrated to South Africa. After completing his university education, he went back to Scotland for his medical training and received his degree from the University of Edinburgh.

John is a superb raconteur, not surprising in view of his Celtic ancestry. He told me that his family crest had an elephant in its center. When I asked why a Scottish family crest should have a tropical or subtropical animal on it, he replied that was well authenticated. The Celts had originally been located in the Danube-Black Sea area. Apparently some of his ancestors had been Celtic chieftains and allies of Alexander the Great. At the time Alexander prepared for his conquest of Asia Minor, he gave elephants to John's ancestors to be used for military purposes in protecting the northern flank of Alexander's European empire while he was in Asia.

I found John to be an interesting, self-confident man, and I enjoyed listening to his stories about his youthful days in South Africa as well as to his opinions about medical education. It was a privilege for me to be the commencement speaker on his campus in 1964.

At Berkeley Glen Seaborg and Edward Strong were the Chancellors who followed Clark Kerr in that office. I never came to know Seaborg intimately, but I did know and appreciate Ed Strong. Before he assumed the chancellorship in 1961, he had had a distinguished career as a member of the Department of Philosophy at Berkeley, and had also served as Vice Chancellor of Academic Affairs. In all respects he was and is a scholar's scholar.

During the summer of 1964 after I had resigned from my duties at Riverside and was on sabbatical leave in Hawaii, I found to my delight that Ed was participating in a Philosophy conference at the University of Hawaii. The evening before the Strong's returned to the mainland, Evelyn and I had dinner with Ed and Gertrude. Later in the evening we all walked to Punahou School to view the famous night blooming Cereus, a cactus that grows on the periphery of the Punahou campus. As we walked along admiring the striking, ephemeral flowers our conversation turned to campus affairs and student attitudes.

I suggested to Strong that my gut feeling was that the simmering student unrest that I perceived developing on the campuses across the country and especially at the University of California had reached such a level that I was convinced that serious troubles would erupt during the coming school year. Strong replied: "I think you are right, and if it

Spieth: occurs at Berkeley I shall do my best to meet the problem but I shall probably be crucified". His prophecy was correct, and he was crucified. The bitter experience that Ed was subjected to as a result of the Free Speech Movement on the Berkeley campus was the deepest tragedy that I have known during my academic career. Apparently some of Strong's associates on the campus made injudicious decisions, but I do not think that any action the University could have taken at that time could have avoided the student revolt. If the Sather Gate incident had not occurred, other incidents would have served as the trigger. It was a double tragedy that Strong, who had always been a devoted member of the American Civil Liberties Union should have been a victim of such events as occurred at Berkeley.

Brienes: Are these all of the chancellors that you knew during your time at Riverside?

Spieth: No, chancellors were appointed to the new campuses at Irvine and Santa Cruz, Dan Aldrich at the former and Dean McHenry at the latter. There was a time when Dean McHenry had served as a Dean -- thus Dean Dean McHenry. Both of these chaps clearly enjoyed administrative activities and I think preferred such duties to teaching and especially research activities. In this respect they were similar to both Murphy and Gould. If they had lived in the latter part of the Eighteenth Century, both would probably have been active members of the Continental Congress -- or possibly they would have been ministers. Both are highly articulate and persuasive. Aldrich is tall, handsome, athletic, and a populist at heart. McHenry during his undergraduate days was a roommate of Clark Kerr's. The unique format at the Santa Cruz campus is unquestionably McHenry's brainchild.

Brienes: You spoke earlier about attending Regents' meetings and the fact that the chancellors met with Kerr the evening before the Regents' meetings began. Let's consider this further.

Spieth: Previous to Kerr's assumption of the presidency, the chancellors (at least those from the smaller campuses) hadn't attended Regents' meetings except when specifically requested to do so by the President. Kerr quickly began to develop a University-wide decentralization of administrative duties. Thus the chancellors and the campus administrative staffs became more involved in duties and especially in the decision making that had previously resided solely in the President's office.

Brienes: What occurred at the meetings? Did they serve the function of decision making or just communication?

- Spieth: Both. My reading is that Kerr wished to have advice from the group on problems that involved the entire University and that he wished to inform us about actions that were being planned for the future. He typically briefed us on the matters that would be before the Regents. Each one of us was given the opportunity to express our views, but only infrequently were we asked to vote on a matter.
- Brienes: Did you then subsequently attend the Regents' meetings?
- Spieth: Yes -- those portions of the Regents' meetings which were "open" but not the "closed" sessions, unless specifically invited. For those sessions that we did attend, we sat in the spectators' seats.
- Brienes: Might you expect to be questioned by the Regents?
- Spieth: Sometimes you knew you were going to be called on either by the President or by the Regents, but at all times we had to be prepared for inquiries.
- Brienes: Were there other times at which the chancellors met as a group?
- Spieth: Very rarely. Occasionally there were major functions such as the time when President Kennedy spoke at Berkeley's Charter Day exercises, or when President Johnson received an honorary degree at UCLA, or when a new chancellor was inaugurated.
- Brienes: At those meetings with Kerr, my presumption is that you were all considered as equals but my guess is that some were more influential than others. Was that the case?
- Spieth: No black and white answer can be given. Murphy was articulate and aggressive, but each of us was given a chance to express our ideas about any given matter.
- Brienes: The lobbying efforts of the University were centralized in the State-wide administration so the campuses separately did not have any function in Sacramento with the State government. Is that so?
- Spieth: Formally and theoretically, that is so, but functionally not. The larger campuses, I believe, sometimes had input with Sacramento indirectly and the President might ask for specific input. Probably the most influential chancellor with the State government was Mrak. This situation resulted partially because of his proximity to Sacramento, but mainly because of his unique political instincts. Except for Jim Corley, who was the

Spieth: University representative in Sacramento, no other individual in the entire administration had the respect and confidence of the Legislature that Emil developed.

I might add that Mrak's proximity to Berkeley also gave him a "leg up," so to speak, on most of us. Not only was he physically able easily to reach the State-wide administrative headquarters, but also he had been a Berkeley faculty member before coming to Davis, so he was well acquainted with many of the administrative personnel. Either Emil or one of his staff could and did visit Berkeley frequently and constantly, on an informal basis seeking out the availability of resources, i.e., funds and prospective plans, etc., that were under consideration. Although I considered him a good friend, there were times when I could have done with a less competent chancellor at Davis. [laughter]

Brienes: Let's turn back for a moment to the campus unrest -- I think what you call the "student rebellion". You have, I thought, skirted the issue of what was the cause of the student rebellion of the sixties. I got the sense from you that you feel it's kind of cyclical -- that occasionally certain generations will simply have revolts. But was there anything about the period of the 1960s that you think set off the student rebellions?

Spieth: Well, I suppose in hindsight we would now use a different term. For a variety of reasons the students became alienated.

Brienes: Well, you called it a "rebellion" -- they must then have been rebelling against something. They were being alienated from something.....

Spieth: You know that the actual rebellion at Berkeley started over a regulation concerning a small piece of soil. But the trigger is one thing and the cause is another thing. If you go back to the late fifties and early sixties the students were constantly complaining about "lack of freedom" on a variety of scores. They also felt not enough attention was paid to them as undergraduates in teaching. The latter was not so at Riverside, of course, and still some of our students became restless, too, in the early sixties.

Brienes: Does that then kind of toss that out as a cause?

Spieth: I think in a sense it partially crosses it out as a cause, but it was surely one of the things involved in the unrest on the larger campuses.

Brienes: The fact that graduate students were getting the attention of the professors and not the undergraduates?

Spieth: Secondly, of course, there were rather strict regulations as to who could talk on campus. Communists were not allowed to talk on campus; politicians were not allowed to talk on campus. The University was adhering strictly and legalistically to the separation of what amounts to society and its problems and education. The assumption was that propaganda was not a part of education -- and political speakers are propagandists; the Communist speakers are propagandists, and so on. The general mores of society were different then, and the students were beginning to react to them; sexual mores were beginning to change.

Brienes: Among the young, you mean?

Spieth: Among the young. Obviously society was undergoing several types of change, a kind of metamorphosis away from the family tradition of the early part of the century which tended to be puritanical. At least in their homes, parents were allowing students greater freedom.

Brienes: Furthermore, in general, after World War II I would say that two basic things happened as a result of the Depression and World War II. Parents of the students of the sixties had been relatively young, typically in their early teens, during the Depression. They saw the suffering that they and their families went through at that time. Then came World War II when they saw their peers die; many of them were themselves injured. They saw a lot of fighting and dislocation. In spirit they came back saying: "Our children are not going to have to go through the sort of things that my parents went through and that I went through. We're going to see that the world is a different place and that children have a different slice -- a different role in society".

Spieth: I think the home environment in which the students of the sixties were reared was quite different from that into which many of us had been born. Youngsters had more freedom. If they wanted something, they could ask for it and usually get it. The whole impact of progressive education was felt at that time. Students coming to college considered themselves to be mature adults; furthermore, they felt that if they asked for something they should receive it. A subsidiary but relevant factor was that due to better diets and to the development of antibiotics, these youngsters reached puberty two to four years earlier than youngsters did during my childhood. They

Brienes: appreciated it at that particular time. [laughter].

Spieth: therefore were physically and hormonally fully fledged adults when they entered college.

Brienes: There is what I guess you would call a theory to help explain the student revolt of the sixties that puts the whole problem in the context of generations unable to communicate with one another and the growth of a sub-culture, a youth sub-culture, in this country.

Spieth: This was a different sub-culture, there is no question about that, but I think the reasons for the difference in the sub-culture were those that I have just outlined. As a biologist I always found this a bit repugnant because it seems to me that a young human growing up needs two things: one, it needs love and affection; second, it needs discipline. This is the primate pattern and it is a valid pattern for human beings, so far as I am concerned. It certainly was not the pattern that the youngsters growing up in the fifties knew.

Brienes: You don't think the discipline was there?

Spieth: The discipline was simply not there.

Brienes: And your explanation for that is the experience of the parents with the deprivation of the thirties and the experience of World War II?

Spieth: That is my strongly held personal opinion.

Brienes: Was the love there even if the discipline was not?

Spieth: The youngsters probably received a normal amount of love. They were in the main treated with affection by their parents and I think also with considerable indulgence. The parents were sufficiently affluent to give their children whatever the youngsters asked for, without exacting a measure of responsibility.

Perhaps a typical example is that my son, who was born during the war years, complained once that he was not paid for doing home chores although all of his friends were financially rewarded for chores. Evelyn and I pointed out to him that he was a member of our family, and as a member of that family he had certain responsibilities just as each of us did.

Brienes: He accepted that?

Spieth: He accepted it, perhaps somewhat grudgingly. As a mature man he can see our point of view. I don't think he particularly appreciated it at that particular time. [laughter].

Brienes: I get the clear sense from you that the parents get the blame.

Spieth: Parents get much of the blame as far as I'm concerned, yes.

Brienes: I don't mean to put words in your mouth, but it seems almost a failure of will; that is, you were able to say to your son, "You're not getting paid for this", and you meant it because it was deeply ingrained in you. But it seems not to have been the case with the majority of parents.

Spieth: Perhaps I should add that when we refused to pay Phil for doing his share of the chores around the place, we also pointed out that he was receiving an allowance from the family funds, just as each of his parents were.

Brienes: That's interesting. How did it happen that you came to Davis?

Spieth: I had planned to return to Riverside after my sabbatical. In fact we had bought a home there. I expected to return to the Life Sciences Division. But Emil Mrak asked me to come to Davis when I was attending meetings on the Davis campus in the spring of 1964. Well, I usually make up my mind quickly on critical things like this, because if you spend too long thinking about it, you allow the non-essentials to interfere with the basic considerations. It occurred to me that life would be far simpler for me and for the next chancellor at Riverside if I were no longer around the campus as a faculty member, particularly on a fairly small campus and in a town where we knew many, many people in many different walks of life.

Brienes: You would sort of be an elder statesman.

Spieth: Not really, because I would be a faculty member. But I could see people coming around who were disgruntled about something the new chancellor said or did, trying to talk with me about matters no longer under my province, asking me for advice that I would not want to give under any circumstances. So I thought about the offer Emil had made for about an hour and then went back and told him we would come to Davis.

Brienes: This was after talking to Evelyn, I presume?

Spieth: No, I had not talked yet with Evelyn about the offer.

Brienes: No?

Spieth: No, this was one time I did not.

Brienes: My goodness! I wouldn't have dared do something like that!  
[laughter].

Spieth: Well, knowing Evelyn, I felt sure that she would agree because she had raised some of these problems to me, suggesting some of the difficulties we might face in the years ahead. Although at that time we did not know who the new chancellor would be, we both had felt it would be easier for him if we were not there.

Brienes: So, you had already discussed with Evelyn the uncomfortable situations that might arise when you went back to being a faculty member?

Spieth: Yes.

Brienes: You make it sound too easy. It must have been much more difficult emotionally to leave that place then.....

Spieth: No, it really was not.

Brienes: But you had many good friends there.

Spieth: We did, indeed.

Brienes: You were established in the community.

Spieth: There's no question about that. We appreciated our friends there and we had great respect for them. An amazing group of people. We had found them to be intelligent, sincere people who had made the experience at Riverside really a highlight in our lives. We knew we would miss them, but we were comforted by our plan to return to Riverside when I finally retired as an active faculty member. So we sold the house back to its owner, who said she would "save" it for us to come to upon retirement. We started our sabbatical in Hawaii the first of July, and then in December on the way to the University of Texas we came through Davis and bought the house where we are now living.

Brienes: That was in '64.

Spieth: Altogether it was an easy, as far as I was concerned, an easy exit from administration and back to doing the things I needed to be doing. In Davis we were both busy, but leading a relatively uncomplicated life which we found perfectly agreeable and feasible -- back again to our own daily chores; back again to Evelyn having time to follow her own interests and to reading and typing my letters and manuscripts.

Brienes: You didn't have visitors every day for dinner! [laughter].

Spieth: We missed the visitors, of course, and we missed some of the excitement, there's no question about that. But we also welcomed the return to our own fields of interest, with time to pursue them.

Brienes: Was your son by this time launched on his own career?

Spieth: Yes, he was on his own all right.

Brienes: So there were no children to move; your son had already left. Was he at Berkeley or some place down south?

Spieth: No, at that time he was in the Marines. In fact, when we came to Davis, he was in Vietnam.

Brienes: Was he married?

Spieth: Yes, he had been married in June of 1963. We were in Texas when he got orders for Okinawa, which we knew meant that he was on his way to Vietnam. He and Mia met us at Big Bend State Park in Texas for a farewell visit. Then he got Mia settled in Ashland, Oregon, for the time he would be away, and she completed her Bachelor's degree at Southern Oregon State University in Ashland. We knew that he would be leaving in April from Travis Air Force Base at Fairfield, so it was agreed that Evelyn would fly back to see him off, and then she and Mia could come to Davis to the house we had bought the preceding December. They did this, and had a busy several weeks finding a builder to make the modifications and additions to the house that we had agreed were necessary. I did not finish my studies at the University of Texas until some time in June, when I joined the ladies in Davis. Mia went on to Oregon as planned, and Evelyn and I spent the summer in Hawaii.

Brienes: When you left Riverside, there must have been some farewell parties?

Spieth: Oh yes, there were farewell parties.

Brienes: What did happen? How were you sent off from Riverside?

Spieth: Oh, many people were very, very pleasant.

Brienes: Was there a dinner given in your honor?

Spieth: Oh yes. The Regents and State-wide personnel met on the Riverside campus in the late spring and gave quite a dinner at the Mission Inn. They were all very pleasant.

Brienes: How about the faculty and the staff at Riverside?

Spieth: Oh yes, actually the faculty and staff were unbelievably kind.

Brienes: You seem to have trouble speaking about it.

Spieth: It's just that there were so many parties. There was a large one in the dining commons on campus. It was really a lot of fun. Amongst other things they gave me a large model of a Drosophila which had been made by the entomologists. And they gave us a number of other things, very lovely reminders of many friends. The Citizens University Committee, Town and Gown and the Chamber of Commerce as well as other organizations and individuals had delightful farewell parties.

Brienes: This is skipping a bit, but did you say you intend to move back to Riverside?

Spieth: Oh yes, we had intended to do just that.

Brienes: Is that still an intention?

Spieth: We came here with the intention of going back to Riverside some day. When our dear friend, Buff Sperry (whose house we had once bought and then sold back to her), died a few years ago, we inherited that house. So we had a house in Riverside and one here. We actually put our house here up for sale at one point.

Brienes: The house we're in now was up for sale?

Spieth: Yes. A couple of weeks after it had been put up for sale, one morning at the breakfast table we looked at each other and said almost simultaneously: "Why are we doing this? Why go through the turmoil of another move?" That same day we took this house off the market and later sold the one in Riverside to a young UCR faculty member, and it delights us that he and his family are thoroughly enjoying it.

Of course, a major factor in our decision certainly was the proximity to Davis of the Bay Area where our son and his family live. Also -- here I can ride a bike to school, whereas in Riverside I would have had to drive a car to school. There I would have been just another old-timer wanting office and

Spieth: laboratory space. Here I was still a member of the Department, with a lab all set up and going. Finally, this is an easier town in which to live. Riverside has become a rather large metropolitan area, a busy metropolitan area.

Brienes: There is no comparison with Davis.

Spieth: There is no comparison with the closeness of Davis. We have a smaller group of friends here than we had in Riverside, by far, but they are stimulating, interesting, charming friends. Also, as I said, we are much closer to our children whom we enjoy.

Brienes: Your son is at Berkeley?

Spieth: Yes, Phil is at UCB, and he and his family live in the Bay Area quite near Berkeley. In a sense we have always been an extended family. When I was small, there were an uncle and also a grandfather in our home. When Philip was growing up, Evelyn's mother lived with us and my own mother visited for prolonged periods each winter. I have always felt that the extended family is an ideal situation for rearing children. In an appreciably real sense, we still have an extended family for our grandchildren and their parents are often with us. Our four grandchildren are with us tonight.

Brienes: That's Karen, Chris.....

Spieth: Kimberley, Kelley, Kristin, and Kara -- the four K's.

Brienes: That wasn't by accident?

Spieth: No, not by accident.

Spieth: Yes. Of course that was an appointment by the Chancellor.

Brienes: What was that all? What was that was being served by this? Did he need you here etc.....

Spieth: I don't know that he needed me in the Department of Zoology. The Department, of course, was smaller then; there were some young men but more were older men. I had known some of them -- not all of them -- so that I was not dining as a stranger.

The chairman, of course, always served rotating terms, and most of the older men in the Department had already been chairmen at one time or another. I knew the men well enough to think that at least they would accept me perhaps as a guest without excessive antagonism.

- Brienes: Davis
- Brienes: When you made your move to Davis and Emil Mrak offered you a position in the Department of Zoology, was this done with the knowledge of anyone in the Department?
- Spieth: I do not know and I have never inquired.
- Brienes: It seems that it was an off-the-cuff sort of offer.
- Spieth: I don't know. It may have been.
- Brienes: I don't quite know how appointments are made here actually, but could appointments be made simply by the Chancellor?
- Spieth: This was a transfer, of course.
- Brienes: Does that make it different?
- Spieth: Yes, this is somewhat different. After all, I was a faculty member in the University of California and I had been accepted by the Academic Senate. I have always gone under the assumption that you do not investigate those things that do not need to be investigated and I simply allowed the matter to rest.
- Brienes: You came here as a full professor in the Zoology Department?
- Spieth: Yes, as a full professor in the Department of Zoology and as chairman of the Department.
- Brienes: You were chairman when you came?
- Spieth: Yes. Of course that was an appointment by the Chancellor.
- Brienes: What was Chancellor Mrak's need that was being served by this? Did he need you here for.....
- Spieth: I don't know that he needed me in the Department of Zoology. The Department, of course, was smaller then; there were some young men but more were older men. I had known some of them -- not all of them -- so that I was not coming as a stranger.

The chairmen, of course, always served rotating terms, and most of the older men in the Department had already been chairman at one time or another. I knew the men well enough to think that at least they would accept me perhaps as a peer without excessive antagonism.

- Brienes: Did you find that to be true?
- Spieth: Yes, I think so. They may have had their reservations but basically they were cooperative and helpful.
- Brienes: Could you give me an off-the-cuff comparison of the strengths of the Department of Zoology at Davis with that at Riverside? How did they differ?
- Spieth: They are different, of course, in that at Riverside the Division of Life Sciences includes Botany as well as Zoology and Bacteriology (or Microbiology, whichever you want to call it). At Davis the Department is restricted to Zoology. Of course, the Riverside Zoology section was smaller than that at Davis where there are about double the number of zoologists. A number of the faculty at Davis were, as I have indicated, mature men who had had long careers in zoology, whereas at Riverside the faculty members were young. There were more graduate courses here and a larger variety of undergraduate courses than at Riverside.
- Brienes: Were the research facilities here important to you? Were they adequate? Did it make much difference to you?
- Spieth: Well, when I first came here the facilities were certainly inadequate. But I was able to get the necessary materials assembled and my research needs were not that great. As far as equipment was concerned, I was able to get what I needed and I was given a laboratory where I could go from my administrative office and work. I was well cared for.
- Brienes: How about the people that you were working with in the Department at Davis? Were there particularly memorable people in the Department when you came? I'd like to hear about the faculty that you met here.
- Spieth: In addition to the active faculty members, there were two remarkable Emeriti professors. One, of course, was Tracy Storer who had actually founded the Department and who had achieved an international reputation not only as a rodent specialist but also as an author. He was famous around the world for his Zoology textbook which had been for many years and continued to be the major college text in zoology. When I arrived here, he was retired but still active and had an office on campus. We quickly became warm friends.

His amazing wife, Dr. Ruth Storer, had had a long and highly productive career as a pediatrician. She still is one of the most beloved women in the community.

Spieth: Together they established the Storer Life Science Lectureship for the Davis campus. It was one of my happy days in life when, with the aid of Emil Mrak, the Regents named our new Zoology building Storer Hall.

The other Emeritus Professor was Lloyd ("Padre") Miller. He had been the first chairman of the Department of Zoology on the UCLA campus but was now living in Davis with the Fred Addicotts. He shared the office with Tracy Storer and became truly beloved by graduate students, undergraduate students, and the faculty.

Both of these men have now slipped away, but both left an indelible mark on the Davis campus and particularly on the Department of Zoology.

The active faculty was relatively small when I came here; the members were quite competent in their respective fields. But it was clear that the entire area of biology was changing rapidly, particularly with the developments in molecular and cellular biology within the past several decades, and this department, at the time when I arrived, was more directed towards field zoology than it was towards cellular and molecular biology. Since the campus was growing rapidly, we were able to get additional faculty members. What we attempted to do was to bring in young men to fill in the gaps in cellular biology -- in a broad sense that would include molecular biology.

Brienes: Is there a division in the field of biology between these two groups?

Spieth: It is, like other fields, made up of a number of different areas and no one individual today can encompass the entire area even when interested in all of them. At least as far as competence in offering a broad spectrum of courses and research opportunities, it is perfectly clear today that a variety of specialists is necessary. Other departments are the same way. In the History Department you have specialists in medieval history, European history, modern history, and other categories. In the same way we need people in various aspects of cellular biology and in various aspects of field zoology. Sometimes we call them "inside" and "outside" biologists, depending on whether they are working with whole animals or with parts of animals.

In large institutions with large departments, it is common to break the group up into separate departments or at least sub-departments. There is always a certain amount of

Spieth: stress (well, stress is the wrong word to call it -- perhaps points of view would be better). As long as the members of the faculty have empathy for and understanding of the entire subject matter, the department can hold together functionally both on the intellectual level and also on the administrative level.

I feel strongly about this matter. You cannot put together within a department areas of interest that are too diverse without having real problems. But if the people involved have empathy for what others are doing, then the group can function well. I think in the Department of Zoology at Davis we have achieved this. The Department has actually doubled in size since I came here, and we have a well knit group made up of people who understand each other's points of view and appreciate each other's interests. The Department has become one of the better departments in the United States, though not the strongest by any means.

Brienes: So it has about doubled in size. Of the people you brought in, are there some who are particularly outstanding in their fields?

Spieth: They are all highly competent individuals. I go on the basis, from my own experience in observing departments over many years, that to build a strong department, the best way to do it is to bring in the brightest, most competent young men and women that you can find in the field and start them at the bottom of the ladder. In doing it this way, you can keep your age distribution within a department fairly well scattered. It is important that a department never reaches the situation where it is made up mainly of full professors except for one or two assistant professors. I prefer to have a group that varies in age so that retirements do not all come at once, and so that young people with new ideas are constantly being added. I am trying to say that both retirements and additions should be fairly well spaced out. I wouldn't say that we have achieved this with exactitude, but we have, I think, done an effective job.

Brienes: When you were hiring at the assistant professor level -- was this partly a function of the fact that molecular biology is a newer field?

Spieth: No! No! There were a number of molecular biologists of considerable competence that we might have gone out and tried to attract to Davis. I do not believe in pursuing that kind of program, and I induced the faculty to agree to this -- that we

Spieth: should hire young, new Ph.D.s who we thought were the best possible individuals we could find for the positions available.

Brienes: At Riverside you said that you were financially strapped and forced to hire everyone at the junior level. Did anything like that restrict your.....

Spieth: Usually any new position given to an established department is indicated in the budget at a beginning level, but there is always flexibility (at least there was when I was chairman) so that if you had a candidate who fitted exactly the needs of the Department at that particular time but who was not willing and should not have been asked to come at the actual beginning level, then it was possible to have the budget increased. Some of our new faculty came in a step or two above the bottom level, but they were all young persons who had just finished their degrees and, in most cases, had had postdoctoral experiences. We did not attempt to bring in full professors.

Brienes: While you were chairman of the Department, was the period of affirmative action programs coming into vogue? Did these affect your hiring practices?

Spieth: We always tried to get the best person possible for the position. It just so happened, I guess, that only one of the applicants that I can remember for any of the positions we had open was a minority person in the sense of being a Black or a Chicano.

Brienes: Of all the applicants you had?

Spieth: There was one, yes.

Brienes: That is generally true in the field of zoology.....?

Spieth: No, I would not say that it is generally true, but the biological sciences in the past at least have not attracted a great number of minority peoples.

Brienes: Well, did you come under any pressure?

Spieth: Oh yes.

Brienes: For affirmative action hiring?

Spieth: I was retired before the affirmative action program reached the status it has today. One of the resolutions I made firmly

Spieth: when I retired was that I would not engage in such affairs as appointments or promotions in the Department, because I do not believe it is appropriate for a man to get involved in decisions if he doesn't have to live with them. As a retired member of the faculty, if someone comes to ask me for advice I will be willing to give it, but I certainly am not willing to participate in the affairs of the Department with respect to such matters as curricula, appointments, and so forth.

Brienes: You are speaking of today?

Spieth: Yes.

Brienes: When did the Department feel the effect of the move for affirmative action? -- if it wasn't when you were chairman?

Spieth: It came in gradually. Although it was in existence when I was still chairman, we simply sought applicants for the available positions, advertised widely all over the country, received the dossiers from the applicants, and then asked those who seemed best prepared to come to Davis to give seminars and visit with all members of the faculty. Then we made our decisions on whom to select.

Brienes: Do you feel that there has not been in the past any discrimination within the Zoology Department in hiring on the basis of sex or.....?

Spieth: Certainly there has not been in the Department of Zoology here.

Brienes: Then I would imagine that affirmative action would not have had an enormous effect on you. So that has not been a big issue in the Department?

Spieth: No, not as far as faculty is concerned. With respect to the support staff (secretaries, technicians, etc.), we were forced to take one person who we knew was totally incompetent. Eventually due to administrative changes, we were able to be relieved of this problem. Today we have a superior staff group of which more than a third are minority personnel.

Brienes: Emil Mrak told me that it was under you that -- he gave you credit for building this Zoology Department. Is he justified in making a statement like that?

Spieth: I will let Emil stand on his own words and not try to interpret what he meant. I could perhaps disagree with him in certain respects. [laughter]

Brienes: I got the strong feeling from him that he felt that the Zoology Department was going absolutely nowhere before you came. That intrigued me, and I don't know how to pose questions to you that won't lead you to make self-serving statements.

Spieth: There were competent men in the Department and some of them are still there; a number have, of course, retired. The Department was growing and it was simply a question, as far as I was concerned, of balancing the Department with respect to subject matter areas that should be encompassed in modern zoology. To do this it was necessary to get the best people possible and also to see to it that each man in the Department was treated equitably and had his own or her own responsibilities.

We reorganized the administration in the Department to a certain extent. When I arrived here, we had a very small office staff and a number of them were, for personal reasons, leaving. We needed a new chief non-academic person shortly after I arrived. The non-academic staff at that time was made up of a number of competent women who are either still with us or have retired because of age. They came to me and suggested that perhaps a man would be appropriate as the administrative assistant. I agreed, and looked around to see if I could find such a person. We asked the Personnel Office to provide us with a number of applications. The list provided included a number of ex-military personnel. At that particular time many of the people involved in military service after World War II were just about at the retirement point. Amongst these was a man by the name of Harold Evensizer, a full Colonel.

Brienes: I have spoken with him.

Spieth: He was retiring from Travis Air Base where he had been in command of the Base Regiment. I was somewhat dubious because the kind of person I envisaged for our job was a top sergeant, a man who was highly competent but who was used to being involved in day-to-day work himself. It so happened that I had some friends in the Air Force either retired or active. I called one of them, asking if he knew anyone who might know this particular applicant. He said he thought he did and gave me the name of a general to call. I called the general and talked to him for quite some time. He gave me a high recommendation for Evensizer and he said: "Amongst other things, if he has had any one difficulty as an officer, it is that he tends to want to handle too many of the details himself". I said to the general, "This job is one in which the man will have to do many detailed operations himself. He can't ask a sergeant or even a corporal to do them for him". [laughter]. The general fully understood.

Spieth: We interviewed a number of men and also women, but it was Evensizer whom we picked -- and it was probably the best appointment the Department has ever made. He proved to be highly competent and the right person for the job we wanted done. He is retiring this year. The Department will miss him.

When he joined us, I told him: "Now the way I want this organization run is that the faculty and the chairman will set policy and you will be the operations officer. The non-academic personnel will be under your immediate supervision. If one of them leaves for any reason, it will be your responsibility to find a replacement. You will execute policies established by the Department. I do not want to be involved in the day-to-day operations. You will recommend merit increases for the non-academic people just as the faculty and chairman will recommend for the academic people. You also will attend faculty meetings, but you are not expected to participate unless asked to do so. You need to attend the meetings to know what the feelings and attitudes and intents of the faculty themselves are. But they are the ones, along with the chairman, who will set the policy".

This was agreeable with him and the first thing he asked me for were the University regulations. I had them in my desk ready to give him. I would say, without fear of contradiction, that he became the best departmental administrator on this campus.

Brienes: Ah, that is quite a compliment.

Spieth: There is no one equal to him, and the system has worked perfectly with respect to the faculty, to the graduate students, and to the undergraduate students.

Brienes: That was a good load off your mind to have somebody like him.

Spieth: It was a major factor in developing a cohesive department. Faculty members, by and large, in all departments are not by nature cooperative people about administration. Otherwise they wouldn't be faculty members! [laughter].

Brienes: I didn't know that was in the genes! [laughter].

Spieth: They have to be individualistic if they are going to be good faculty members, and so it takes a skillful person to handle the departmental affairs. Evensizer has done that.

Also, I began to have regular faculty meetings. I felt that the Department in some ways had not been talking to each

Spieth: other sufficiently, and so I had a faculty meeting once a week for a long time. We do not have that today. It is not necessary. But in the early days, when we obviously needed to review the curriculum because of new people coming into the Department, and because of changes on the campus, I thought we needed to talk over many matters intensely, which is something you cannot do in just one meeting. So we met every week.

Brienes: Was this for your first year?

Spieth: About the first three years. Then gradually it decreased.

Brienes: How was your attendance?

Spieth: I saw to it that everybody was there unless they had a valid excuse. I told them that this was part of their responsibility. Not those exact words, but I left no doubt as to my meaning.

Brienes: Was this your major way of keeping up communication between you and the faculty?

Spieth: Yes it was.

Brienes: Did it make a difference?

Spieth: I think so.

Brienes: Is there any tangible way you can show that? Or is it simply a matter of the sense of how things were?

Spieth: It's just a matter of sensing the effect.

Brienes: What is your own view of what a chairman's proper role is in a department like that of Zoology?

Spieth: The role of the chairman in the University of California is different than it is in some of the other institutions, because we have an Academic Senate in the University which is a vital and excellent organization. In many institutions, of course, the chairman, whether the name is given to him or not, is the departmental head and is responsible entirely through the Dean for the operations of the department. A chairman here is responsible not only to the Dean but also to the Academic Senate and other organizations on campus, so there is a subtle but tangible difference between the way a department is run in the University of California and the way many (but not all) other institutions operate.

Spieth: The function of the chairman, I believe, is to be a leader of the group, to anticipate future developments, future problems, and to persuade the faculty to think deeply about these matters and to come to a consensus about them. His second role is to serve as a liaison between the department and the academic administrators of the campus. On that basis I made the assumption that the chief non-academic, (in our case, Mr. Evensizer) would play a somewhat similar role as far as the day-to-day operations were concerned -- such things as the physical plant, purchasing, and the like, thus relieving the chairman from these concerns.

Brienes: You said one of your roles was to seek consensus on issues.

Spieth: Sometimes one cannot arrive at consensus but can come as nearly to it as possible.

Brienes: The consensus was arrived at, I presume, during the weekly meetings at first. Would you make decisions by actually voting? Is that how it would be?

Spieth: Most decisions of any importance were made by actual vote or by raising a problem to the faculty and suggesting a solution, asking if that were a satisfactory way to proceed. If several disagreed, we would not proceed in the matter; if they approved, we would.

Brienes: The matter of curriculum changes.....?

Spieth: Curriculum changes, faculty appointments, graduate student appointments, and also the numbers of graduate students.

Brienes: One of the things I found when I came here was that a large number of graduate students had been graduate students for entirely too long. I have a feeling on the matter of graduate work. I think that the function of graduate work is to teach an individual how to be a scholar. That means he (or she) needs a certain amount of course work and experience in research, but does not need to have accomplished a large project. In fact, the smaller the project perhaps the better, within certain limits. He or she needs to prove to peers and superiors that he or she is capable of doing research, capable of teaching, capable of being a scholar. The faster this can be done, the better it is not only for the student but for society. Under normal circumstances, unless something serious intervenes, the student should be able to do this in four years from the time of receiving the Bachelor's degree.

Brienes: The doctorate?

Spieth: Yes. Now if it is a field in which the background of undergraduate work was not quite adequate for the field and the chosen research program, perhaps it will take five years or, exceptionally, six years. Anything beyond that certainly indicates irresponsibility on somebody's part.

But there were graduate students in the Department here who had been around seven or eight years. They were apparently enjoying life rather well because they were in a sub-culture of their own; often their wives were working and supporting them more than they were supporting their wives or families. Some of them were very annoyed when I took drastic action to see that they got their degrees and got positions.

Brienes: What do you mean by "drastic" action?

Spieth: There were sufficient regulations in the University that they could be eliminated from the campus if they did not finish their degrees.

Brienes: Were they generally on stipends of some sort, or assistantships?

Spieth: Some of them were teaching assistants. Some of them were on research grants.

Brienes: I am wondering what the stick was that you used. I guess you could cut off funds.....

Spieth: There were regulations concerning how long a student should be a graduate student, under what conditions, and the like. These were adequate and I also talked to their major professors.

Brienes: I see. Were they generally people who were past their exams and were dawdling over the thesis?

Spieth: Most of them.

Brienes: That's a chronic disease.

Spieth: It's worse I understand in the humanities than it is in the sciences. But at least in the biological sciences five years should be the maximum.

Brienes: Is that the general rule now?

Spieth: Well, the rules are something like that. I really don't know what they are now.

Brienes: Was there a perceptible "speed-up" in the time of the graduate program after you came?

Spieth: Oh yes there was [laughter].

The other factor involved was that I again looked at the birth rates and came to the firm conclusion that after the beginning of the seventies the jobs in the universities would decrease drastically. There were two reasons for this. One was, of course, the birth rate. But there was, I thought, another major reason in the sciences. Research monies supplied by funding agencies had been going up exponentially in the sixties. An exponential growth is an impossibility to sustain. I came to the conclusion that by the early seventies the legislators in various parts of the country, whether they were in Congress or in the state, would decide that the country couldn't tolerate this kind of growth any more.

So one of the things I did was to induce the faculty to reduce the number of graduate students admitted in the late sixties.

When I came here I found that the Graduate Record Exam (GRE) was not being used as one of the criteria for determining whether a student should be admitted as a graduate student, particularly for the Ph.D. The M.A. is a somewhat different problem. Consequently we decided to use the Graduate Record Exam, not exactly as an elimination agent (although it actually served as that in some ways) but mainly as a guide. When we found an individual who had gone to a creditable institution and yet had low grades across the board on the GRE, this indicated to us that for some reason the individual probably was either not properly motivated or properly equipped intellectually to pursue graduate study in zoology.

Now there were exceptions made when we found an individual, for example, who had come from a small denominational college where perhaps the course work was limited with the result that the student had not had adequate exposure to all of the materials needed for taking the Graduate Record Exam. Furthermore, a student might have difficulty with the use of the English language perhaps because of growing up with another language for his or her mother tongue. Such things were taken into consideration but they served to eliminate a number of potential candidates.

To bring in an inadequately prepared student to attempt a graduate program only to collapse is neither helpful to the Department nor to the student. One should be rather sure that

Spieth: when a graduate student enters, he or she has the ability to complete a graduate program. It may be that the student will decide this is not his dish after all and will leave of his own volition. Some do this when they find out that they are simply not willing to put up with the graduate student regime. And that's all right.

Graduate students educate themselves a good deal. When you have a really bright group, they keep the level high in performance amongst themselves. If you have a poor group, they become sloppy; there is just no question about that in my mind.

For all these reasons, we cut back the number admitted to do graduate work. I think it helped out a great deal. At any rate, it helped to the extent that to the best of my knowledge, at least certainly until I retired, all of our Ph.D.s were able to get an appropriate position of some sort. They may not have gotten exactly what they preferred, but at least they did get appropriate positions. There are people who say, as one chap did, "I will not accept any position that's further than fifty miles from the Pacific Ocean," which is obviously limiting himself a great deal. In his case, it was pleasant that his father was a millionaire so it really didn't matter too much. He did get a position right off the coast. [laughter].

Brienes: That's nice. All you need is a father who is a millionaire and you can wait it out. Could you talk in numbers about how the graduate student population changed? How large was it when you came?

Spieth: I would have to look up exactly, but I think it was as high as eighty the first year or so I was here. We cut it back to between forty and fifty.

Brienes: What percentage of the graduate students were Ph.D. candidates?

Spieth: About half of them were, I would say.

Brienes: Getting back to affirmative action, there was also at least starting to be pressure then to have a racial balance and sex balance among students entering into graduate programs. Did the Department change its recruiting practices any to try to accommodate this?

Spieth: The Department certainly recruited broadly, but we did not mount a national campaign.

Spieth: I suppose I was somewhat oblivious to some things. I had grown up in a segregated community where my own family was the only de-segregated family, and I had always found segregation repulsive. On the other hand, I just took it for granted that if an individual was capable of doing the work and came to the Department wanting to be admitted as a graduate student, he or she would be admitted if really capable and qualified. My own unconscious attitude was color blind. An individual faculty member had to accept the students; that is, we did not admit a student unless someone in the Department was willing to serve as that student's mentor for the Ph.D. Spieth: For the M.A. that was different; the student could enroll for the M.A. without a specific assignment to a mentor. We had a committee that would look over those individuals.

Certainly not in my own mind nor, I think, in the mind of any of the faculty members was there any question of discrimination. Biologists tend to be more tolerant maybe than are some other people about this; maybe not. At any rate I never saw the slightest iota of discrimination and I would have sensed it if it had existed, I feel sure. We simply widely advertised. We didn't put out any fancy brochures, but it was well known that we had a rather good department. One of the agencies that rated faculties during the period when I was chairman had given us a rather high rating, and these facts were broadly disseminated. To the best of my knowledge, the question of discrimination never arose during the period I was chairman.

Brienes: I accept your statement on this. It's amazing to me that this would be the case within the past ten years on college campuses. Was there a change in the graduate student composition that came in? Was there a different racial or sex change? Were more women coming into the program as the years went on?

Spieth: Certainly more women have been coming into the program recently. We have more women graduate students now, although we did have a number of them when I arrived here.

Brienes: But not as part of a conscious program to increase the number of women?

Spieth: No, no, no.

Brienes: Okay [laughter]. Let us turn to an allied issue and that is the coming of the EOP program to campus. This had in the late '60s and early '70s some effect on some departments and on their standards. I know, from my own experience, of pressures

Brienes: on departments to ease the way for EOP students. What was the experience of the Zoology Department?

Spieth: I do not know how individual faculty members may have handled these problems in their classes. I, of course, was teaching only a non-major course most of the time, namely Biology 10 which was for people in the social sciences and humanities particularly to meet the graduation requirements in science.

Brienes: Is that a kind of zoology for poets?

Spieth: It's a biology course and rigorous in its own right, but it did not assume that the students taking it had the same background expected of a student majoring in biology. Students came to take the course who were majoring in physics and chemistry, for example, because they wanted some insight into biology.

Brienes: Did you observe cheating and how do you regard that problem?

Spieth: My objection to cheating is not that the cheater gets a better grade but that the better grade will not help him if he doesn't know the subject matter.

Another objection involves a complicated explanation. When you put all the grades for a large class together side by side, you see that they form a curve of distribution. Some years the curve will be skewed one way and sometimes it will be skewed another way. It may be a flat curve one year and a peaked curve another year. But an interesting thing happens: you always find breaks in the curves. The reasons for this are, I think, fairly simple. There are some students who master the material. There are other students who learn the material well but do not really master it. There are still others who are familiar with the material and some who have heard about the material!

Brienes: [laughter]

Spieth: And the "heard abouts" are always the Ds and Fs. The "familiar" students are the Cs; the students who have mastered the subject are the As; the students who know it are the Bs. Some years the break between A and B comes, on the average, between 87 to 88 whereas in the next year it might be between 90 and 91. Therefore I would determine grades not on a strictly numerical basis but on the basis of where the breaks came. If half a dozen students in a class were cheating, that would raise their grades and shift the break point, which meant that some honest students got a raw deal.

Spieth: It doesn't matter too much that the cheaters get an A, for if they don't know the subject matter that is their hard luck. The crime is if the cheater gets an A and thus denies an honest student at the bottom of that break -- just above the break point -- the A that the latter deserves.

Brienes: It's setting up a phony standard of excellence.

Spieth: It is, indeed. I have had all kinds of students in my classes. I didn't worry about EOP students. I do not know what the other faculty members did. All I know is that to the best of my knowledge we never had any complaints.

Brienes: I will say this: All members of the Department, and there are no exceptions, took their undergraduate teaching seriously. They really devoted themselves to undergraduate as well as to graduate teaching. I believe it came through clearly to the students that they had a firm but sympathetic faculty.

Spieth: In many of the courses given in the Department of Zoology, there are students who plan to enter medicine, dentistry, and veterinary medicine -- programs for which it is difficult to gain admission. Obviously such students are diligent and determined to make the best possible grades. This sometimes sets up difficult standards for the other students who are not interested in going on to medicine or in being zoology majors per se. They may be taking the course just because they are interested in the subject matter. They may find the competition quite severe.

Brienes: Was there a pass/no pass system when you were first here?

Spieth: Well, no, not when I first came here, but eventually it came into existence.

Brienes: What are your opinions on grading in that fashion?

Spieth: For some students obviously pass/no pass is an excellent system. For a student who is devoted to a given field of endeavor, deeply interested in it, committed to it, but who at the same time wishes to participate in courses outside of his own area of interest, the pass/no pass is very effective. For the student who wants to use it simply as a way of being able to loaf through a course, it is an abomination.

Brienes: It was designed ostensibly for that first student.

- Spieth: It was designed for the first one and then was abused.
- Brienes: Yes.
- Spieth: And these sorts of things come and go. It doesn't too much matter fifty years from now.
- Brienes: But did the coming of pass/no pass; did that lead to perceptible change in grades? Did the curve change at that point?
- Spieth: Oh, yes. I think that there was a change of the curve; no question about that.
- Brienes: It caused the curve to go up?
- Spieth: Yes.
- Brienes: Was there a general grade inflation that affected the Department of Zoology in your years of teaching?
- Spieth: There was some grade inflation. No department lives in a vacuum. I'm sure there has been some inflation.
- Brienes: What is the explanation for grade inflation?
- Spieth: Oh, grade inflation is one of those things that is rooted deeply in the whole question of egalitarianism which is afflicting our country at present. That is to say, if you take egalitarianism to its extreme form, you will have to give everyone As. And if you don't give them As, it is said to be your fault as a teacher in not handling them properly. On an egalitarian basis, if they had been appropriately instructed, they obviously would have made the same grades as somebody else and made the same grades without really having to come to class.
- Brienes: Since all men are equal!
- Spieth: Since all men are equal -- by edict and not by fact.
- Brienes: Did the Department, when you were there, do anything to combat this? Was this a matter of concern or of action?
- Spieth: No. We used to check our grades each year. I would say, if anything, we attempted to keep a reasonable grade level without allowing inflation to creep in. It did creep in to a certain extent. I have no doubt about that. But basically I would say that the Zoology Department, at least as long as I was chairman, did not engage in measurable grade inflation. In

Spieth: fact, none of the faculty whom I have known took an egalitarian stance about such matters.

Brienes: Well, I have more matters about the Department. We have talked about students and your opinions of EOP programs and pass/no pass systems -- and about cheating and grade inflation. I would like to get some summing up of your work at the Department of Zoology. From what years -- from '64 to when -- were you chairman of the Department? Was it until you retired?

Spieth: Until two years before I retired.

Brienes: Nineteen seventy-one?

Spieth: To seventy-one, yes.

Brienes: For what reason did you relinquish the chairmanship?

Spieth: Because I wanted to take a sabbatical, which I took in residence and in Hawaii from '71 to '72. Ronald Baskin then became chairman.

Brienes: So you were chairman from '64 to '71. What would you sum up as the major changes that occurred in the Department in those seven years?

Spieth: There were several changes. One was the completion of a new building, Storer Hall, which for the first time gave us adequate physical facilities.

Second was the addition to the faculty of a number of intelligent young faculty members.

I suppose third was a development of an esprit de corps within the Department which played an important role in achieving the first two objectives.

During that period several faculty members left the Department for varying reasons. I think the unity of the Department was improved by their going. Several were asked to leave and a couple left to join other units which they felt would be more suitable for their activities.

By the time I resigned as chairman, we had a well-integrated department and a fairly well balanced one considering the number of people that we had. The early decision I made to have the chairman and faculty determine policy and a non-academic

Spieth: officer handle the day-to-day operations had, I believe, played an important role in the Department's well-being.

Brienes: I know you don't deal in scandal or things of that sort, but do you prefer not to say anything further about who left the Department and what the conditions were? I was told one story of someone who left.....

Spieth: One man left shortly after I first arrived in Davis. There had been an intense argument between two chaps in the department. Although that was perhaps the triggering mechanism, the faculty met and decided that this individual would not in the long run make an appropriate member of the Department, and he did not have tenure. He was asked to leave -- which is not an uncommon thing, of course. He was irritated and eventually brought the matter before the campus Privilege and Tenure Committee. The Committee supported the Department. I believed then and the Department agreed that his scholarship was not adequate.

It happened also that he had a very unpleasant personality but this was not the cause for his dismissal. I told the Department when we considered the matter that you cannot dismiss a man for the simple reason that you find his personality unpleasant. The only reason for dismissal is because you think his scholarship and his teaching are inadequate. Fortunately the decision was made upon the basis of competence rather than on personality. When he took his case to the Committee on Privilege and Tenure, each individual senior faculty member involved in the case testified that he had made his decision on the basis of scholarship and ability rather than personality.

Two other men left our Department because they felt they could do better in other departments on campus. They had presumed that the resources of the Department should have been largely given to them for their research activities. I made it an absolute rule that faculty members would be treated equally as far as financial resources and the use of non-academic assistance were concerned -- that there would be no special favors given to any single faculty member. If a member of the faculty wished to have additional personnel to assist him, he had ample opportunity to seek funds through grants and contracts, but departmental funds would be evenly distributed within the Department according to rank; thus senior faculty would be treated somewhat better than middle faculty. And young faculty would be treated best of all because they were just beginning their careers and needed the most help. These two faculty members found this procedure not to their liking

Spieth: and when they had an opportunity to go to another unit where they would be given more freedom from teaching and departmental responsibilities and also perhaps more financial support, they decided to make the transfer. I do not know what financial support and other privileges they have gained. Their transfer certainly has not affected the prestige of our Department.

Brienes: I have a few odds-and-ends kinds of questions now to ask you. One of the most well-known of zoology courses is the Human Sexuality course taught by Professor Hildebrand. Did that begin before you came to Davis?

Spieth: No. That began while I was chairman. When Hildebrand first proposed the course, the Department as a group decided it was not a suitable course in Zoology and so for several years, to my chagrin, he taught the course in the Division of Applied Behavioral Sciences.

Brienes: Could you describe the course as it was originally conceived?

Spieth: I have never delved into the details of the course. It is on human sexuality and Hildebrand is both a scholar and a gentleman as well as a superb teacher. I am sure that the course has been well given, and there is empathy for the subject matter. Having been a student of Kinsey's and knowing from his discussions with me as a graduate student that undergraduates are perplexed and interested in knowledge about sexual affairs, I was delighted when Hildebrand proposed to give this course. I think it is a valuable course, particularly in a society with the Puritan overtones that American society developed. Many youngsters need such a course to solve their personal problems. I can't think of a better man to explain these matters than Milton Hildebrand.

Brienes: How was the course brought back into the Department? What was operating then to do that?

Spieth: I cannot say. It was returned to the Department of Zoology after I left the chairmanship and I am not familiar with the details. I think the Department felt after a time that they had been a little bit picayunish about the matter. Hildebrand had been having difficulties with the administration over being a member of one department and teaching in another. For the well-running of the course, it was helpful to do it within his own department, where a man like Evensizer was responsible for all the TAs, allocation of space, and caring for the other needs of the course. At any rate, he was invited by the faculty to bring the course back into the department, and did so.

- Spieth: Faculty members are peculiar animals sometimes, but no different from other humans in that they have their foibles, and this had been one of the foibles of a Zoology faculty at that particular instant in time. Eventually matters of this kind can usually be resolved.
- Brienes: Was this course something truly innovative at the time Hildebrand proposed it here, or was it something suddenly catching on all over at the time?
- Spieth: I think both. At that particular time there had been a resurgence of interest in this type of subject matter. Of course, similar courses had been taught, in one way or another, at other institutions. Kinsey had taught something like it several decades earlier and others had done so at other institutions, but there was a real resurgence of interest that caused Hildebrand to develop his own course here.
- Brienes: Another matter of interest is the fact that, I believe sometime in the '60s, students at UC Davis, as was true at many other institutions, started having a greater voice in evaluating their instructors' abilities as teachers. Did this occur in the Department of Zoology in the 1960s?
- Spieth: Oh, yes. It occurred campus-wide and, of course, it was somewhat nation-wide. We saw to it that questionnaires were handed out to students to be filled in by them. There were various organizations on campus interested in course content and procedures and they published summaries of what was done in each lecture and classroom.
- Brienes: You mean the notes are sold commercially.
- Spieth: Yes, commercially.
- Brienes: They had to get permission from instructors to do such publishing?
- Spieth: In reality they did not have to get permission from the instructor to do it; after all, they can have students taking a particular course give them their notes. But they usually sought the instructor's permission.

The Department of Zoology has always been much interested in undergraduate instruction. The faculty as a whole pay real attention to teaching. Various men show their attention in different ways, but basically Zoology has always been known as a department sympathetic to the students, and as a group they have spent a great deal of time in considering content of

Spieth: courses and curriculum. We used to have regular meetings to consider the curriculum and to talk about teaching matters. I would say that in general the Department of Zoology had no difficulty whatsoever with these matters.

Some students do not like some instructors; it will vary from individual to individual, but I know of no instructor who is highly appreciated by every student in his class, particularly if it is a large class.

Brienes: How would you summarize the impact of student evaluations on the department? I get the sense that it was not very much of an impact.

Spieth: Student evaluations, as far as I as chairman was concerned, were interesting to see -- but I always took them with a grain of salt. I remembered from my own undergraduate and graduate days that some of the most rigorous professors were disliked by a great number of students. If you talked to those individuals ten years later, most of them had revised their opinions and realized they had had great teachers. At the same time after ten years they might have revised their opinions regarding other teachers whom they had earlier considered outstanding, often saying: "Gee, that chap was really pretty poor; he talked a good line but I really didn't learn anything out of his course".

These are the two extremes; in between are all of the steady, not plodding but competent individuals who are neither extraordinarily well-liked by the students nor disliked by them. A man like Hildebrand, who is a brilliant instructor and a very solid scholar, is an exception. Most of us are not as competent as he as an expositor. On the other hand, some of the people who are well known as outstanding teachers have students flocking to their courses because they know they will get an easy ride and a pleasant, maybe even amusing, time.

Brienes: Entertained!

Spieth: Ten years later it is possible that they will realize that they would rather have had something different out of the course than what they got.

Brienes: Perhaps they should give out the evaluation forms at the tenth class reunion. [laughter]

Spieth: It would be much more realistic if the evaluations were made then. In fairness, however, the questionnaires do enable the

Spieth: professor giving the course and the chairman to locate certain lacunae in the course, if such exist, and to make remedies without serious difficulties. Maybe the course was covering too much material; maybe we needed to rethink the prerequisites; perhaps some items should receive more emphasis -- or less. In this respect, the questionnaires can be of some benefit. Basically it is difficult to change a teacher's total style and format after he's been teaching five or ten years.

Brienes: Yes. Pretty set.

Spieth: My old mentor Kinsey said that every three years he always threw away his course notes and re-did them. He said that sometimes he did them more poorly and sometimes better, but at least he made himself re-think what he was talking about. It is essential for faculty constantly to re-think what they teach in a course and how it fits in with the other courses that a student takes, not only within the department but on other parts of the campus. These are the sort of things that the student questionnaire or teaching questionnaire may give you a hint at. Teachers must keep thinking about their role as teachers, and that's one of the responsibilities of a chairman.

Brienes: I don't quite get a clear-cut idea if you think the student evaluations in their present form are or are not a good idea?

Spieth: The questionnaires change from time to time, and I don't know what's the best form.

Brienes: I mean a written form; I didn't mean specifically any particular form.

Spieth: I suppose it is the best way where large numbers of students are involved. In a small undergraduate institution, students can talk to the teacher individually, and the chairman can talk with the majors in the department when they are ready to graduate to get their frank opinions while they still have a clear memory of their experiences -- and this is probably the most effective way to get student evaluations. But in a big institution and with the liberal society in existence today, I think it would be utterly impossible both physically and psychologically to get all of the students to come in and sit down with the chairman, even if he had time. Therefore the anonymous questionnaire or form, whatever you want to call it, is probably as feasible a method as any that can be used. It has some value but it does not have as much value as some people think it should have.

Brienes: Was the quarter system adopted when you were at Davis?

Spieth: Yes, the quarter system was adopted after I came here.

Brienes: So you were here for the transition. Do you have any general comments or specific comments to make about it and how it affected your department?

Spieth: I have strong opinions on the quarter system. For an institution that has such a diverse student body as we have, in which entering students come from junior or community colleges and other institutions and can pursue a wide variety of majors, I think the quarter system is an utter and complete educational abomination. In a lax, permissive society such as we have today, many faculty and many students like it for different reasons. The students like it, I think, because if they wish to take a vacation and go skiing for the winter quarter, they can do it without losing a whole semester.

Brienes: [laughter].

Spieth: The faculty like it because if they operate cleverly enough within the department, they can manage usually to get one quarter without any teaching whereas if they were on the semester system they would be teaching both semesters. In the instance of those senior professors or professors in the middle of their careers who are teaching courses required for graduation, they would under the semester system have to teach one of these large required courses each semester whereas on the quarter system they can manipulate it so they teach it for two quarters with the at least third quarter free from major courses.

A major course, if properly done, is really a difficult, demanding task. There's no question about that. When one is facing three or four hundred students three or four times a week, it is a strenuous experience requiring much outside work. Examinations must be prepared, given, and graded; all necessary supplies must be made available; it is necessary to see that the TAs receive adequate information and that they take care of their duties; the laboratories connected with the lecture must run properly. If an individual wishes to teach this group of students with some degree of perfection, he's spending most of his waking hours thinking, worrying, and working. Some people simply don't have that kind of time and energy for they probably have other teaching to do and they always have other responsibilities within the department, on the campus, and in their research programs. So it is understandable why the faculty, or some of them, often prefer the quarter system.

Spieth: Now the objection to the quarter system is a simple and very straightforward thing. A course starts with high speed and goes through the ten weeks with essentially no break whatsoever. If a student becomes ill for four or five days, he's lost ten percent of the course. If there is illness in his family and he has to go home, he's lost another ten percent of the course. If he has illness but manages to stay in class, he finds himself exhausted for the finals. With the semester system there are always breaks of several days somewhere along the line and the student has time to recuperate and make up lost work.

Brienes: The second thing is that if a student wants to learn subject matter and really digest it, he can't do it overnight; Spieth: ten weeks is simply not long enough to digest, assimilate, and understand most of the subject matter taught in the major courses in the university, especially when each course is only one among the several courses he is taking. Information is just poured down his throat or into his ears or through his eyes too fast -- however you want to think about it. If he has a little longer period of time and the doses come in slightly smaller amounts per session, I think he will unquestionably master the course material better in fifteen weeks than he can in a brief ten weeks.

Brienes: There are two alternatives that I can see. One of the best ways of teaching a course is one that I used at Cold Spring Harbor in the summertime where we had students for only about six weeks. But they were taking only that one course. They lived on the little primitive campus we had; Spieth: they were in the lab at eight o'clock in the morning; they left the lab at midnight, and they were back at eight o'clock the next morning. They might take one day off on the weekend, and sometimes they might stay up until three o'clock before going to bed -- being young they could tolerate this occasionally, but typically they were studying seven days a week and they were doing nothing except this one area of subject matter! But in the quarter system taking four courses simultaneously for ten weeks cannot result in good learning or in good pedagogy, and I object to it.

Brienes: Secondly, if you have an institution that is small and has a uniform, homogeneous student body where most of the students enroll as freshmen and continue for four years, then you can set up courses that run for a full academic year.

Brienes: Over several of the quarters?

Spieth: I have had a few undergraduate students come in to do special projects with me, but I have not lectured or given formal classes. I have had a graduate student or two in my laboratory.

Spieth: Exactly. But with the number of transfers and the diversity of majors that we have on a big campus such as Davis, this is an impossibility. What has happened here in introducing the quarter system is simple. We used to have four unit courses; these were made into three unit courses. Where we had five unit courses, we now have four unit courses. -- But the faculty try to cram into a quarter as much as they used to give in a semester.

I'm adamant on this matter. I think it is a monstrosity! -- an educational monstrosity!

Brienes: Where did the quarter system idea originate?

Spieth: The quarter system idea originated in the Master Plan for Higher Education which said that we should have year-round operation to avoid building so many expensive buildings on the various campuses. This is another one of those ideas which never works in a permissive society, and I doubt if it worked in any other society. There are several reasons why most students will not conform to a year around system. One is that some students (perhaps most) simply are not inclined to go to school the year round. Secondly, many students who might like to go the year round to finish their degrees quickly have financial difficulties and must work during at least part of the year to go to school the rest of the year. For a time in the past the Berkeley campus did try the year round quarter system -- and found it did not work; so it was dropped. In the meantime we had gone over to the quarter system on all the campuses of the University.

Brienes: You said there was trouble in restructuring courses because they simply tried to telescope them.

Spieth: Yes. That's what you expect to happen; eventually adjustments were made, to a certain extent, but I still think that the faculty probably puts more into a ten-week, four-unit course than they used to put into a three-unit, fifteen-week course.

Brienes: When you left the University in '73, was that the end of your teaching career with undergraduates?

Spieth: Yes. I have done no teaching with undergraduates since I retired.

Brienes: With graduates -- do you still do it?

Spieth: I have had a few undergraduates come in to do special projects with me, but I have not lectured or given formal classes. I have had a graduate student or two in my laboratory.

Brienes: I was just leading up to one big broad question that we have dealt with in parts and pieces and that is: You began teaching on the regular faculty at City College back in '32 and you ended it in '73 and that's a span of over forty years.....

Spieth: Oh, I did a little better than that.

Brienes: Well, because you were doing teaching before.....

Spieth: I started as a TA at Indiana Central in 1923 and I retired in 1973, so except for the war years and one year on a fellowship at Indiana University plus one year at Indiana Central when my major professor had gone to Indiana University to complete his doctoral degree and thus no courses were offered in biology, except for those three years plus the war years (well, during the war years I faced students all of the time) -- so except for three years, I faced biology students for fifty years.

Brienes: Fifty years! I was going to take 1930 but you can go back to the 1920s. Without question this period of time marked the greatest change in the American system of higher education that ever occurred. What I want to ask in a very broad way is what would you point out as the great changes that you have seen, at least in your field, in undergraduate education or in the operation of the universities. You can take it factor by factor or however you want to handle it. What are the great changes that have occurred over your teaching career?

Spieth: The first change, I suppose, is the fact that there were only a limited number of students going on to college in 1922. Those who did were highly motivated individuals. Out of my own high school class (a small one, to be sure), only two or three of us went to college. Friends of mine simply did not care to engage in the financial outlay involved in continuing their education; they just did not care to spend what money they had if they had any, on such matters. Secondly, they knew that the society in which they were living did not necessitate a college education in order to achieve a satisfactory life. The development of modern technology, modern transportation and so forth changed that considerably.

Today we might say crudely that we are dipping much deeper into the barrel for students. Instead of only some five percent of students graduating from high school and then going on to college, now it is a much higher percentage.

Spieth: I do not have at hand accurate statistics, but it certainly must be over fifty percent.

Brienes: I wouldn't be surprised that, if you took all levels of post-secondary school education, it is way more than fifty percent.

Spieth: One columnist recently put the figure at seventy-three percent. So that is one thing: Now more students are going to college and they constitute a far more diversified group than we had fifty years ago.

The second thing, of course, is that private and public colleges and state universities were relatively small and now are much larger and much more impersonal. The psychological milieu is therefore quite different.

The graduate students led monastic lives. We did not participate in extracurricular activities, we didn't travel, we were simply devoted students. We weren't married and, in fact, the department at IU even had a regulation against accepting married students to do advanced studies.

The Great Depression from '29 onward changed enrollment upward. Most young people could not find jobs and so many of them decided to enter college. During that period, at least at CCNY, we had a fantastically poverty-stricken student body. I think that was true at many other institutions, but none could have been more deprived than were the CCNY students.

The World War II years saw a break in enrollments and many institutions pretty much suspended normal activities. A limited number of people did continue going to college but the student bodies were small, and many campuses were temporarily converted to doing specialized things such as the Davis campus which was taken over by the Signal Corps.

After World War II the whole picture changed dramatically. By that time society as a whole had realized that higher education had become mandatory for a considerable proportion of the young people if it wished to achieve the goals that were considered worthwhile. Technological developments, rapid population growth, and all the rest brought us a flood of students, most particularly including the chaps coming back from the War who were able to use the GI bill.

Brienes: Research funds in my graduate school days were practically non-existent. I remember walking into the office of one of my professors at IU one morning, to find him very unhappy. He

Spieth: was a gentle, sweet man who rarely swore or showed any temper, but he was furious that day. He had asked for \$150 for research monies for his program and the dean had denied that -- but had given the professor a salary raise of \$200.

After World War II there was the development of the National Science Foundation and other agencies. Many of us looked at this as both a great boon and a great danger. He who pays for things usually eventually insists on calling the tune, and this has been gradually happening at an increasing rate during the past thirty years. The rules and regulations concerning grants are consistently being made more rigorous and difficult; there is less flexibility for the individual who receives the money than was formerly true. More and more bureaucracy!

One thing that frightens and angers me is the rapid growth of administrative bureaucracy on our campuses. It has unquestionably grown faster than have the student bodies. When I went to Indiana University the campus had only about 3500 students. The head of the Department of Zoology doubled as Dean of the Graduate School. He carried a half-time teaching load and he had one secretary in his office who served as secretary for both the Graduate School and the Department of Zoology. Those two individuals were quite able to handle the necessary affairs for two units. They worked very hard -- no doubt about that -- sometimes long hours and the year round. Although 3500 is not a great number, I can't think of any university with 3500 students and giving Ph.D.s that would do it today with one Graduate School dean and one secretary. So now we build up a bureaucracy on campus and bureaucracies feed upon themselves by their very nature. They have reached a point where administrators are now serving each other more than they serve the students and faculty who get short shrift, especially the faculty. More and more we are becoming standardized and homogenized.

Brienes: Are you referring just to the university? That sounded like a very general comment.

Spieth: It is probably true of bureaucracies in many areas, but I was speaking of the university. Universities, of course, have been known for having different characteristics.

Brienes: From each other?

Spieth: Not only from each other but also from the mores of society, to a great extent.

Brienes: And are you saying now that they are becoming much more closely related to the society that is controlling them?

Spieth: That's right.

Brienes: Are they also becoming more and more like each other because of their relationship to this bureaucracy?

Spieth: I think so, yes.

Brienes: I gather that you are not really very sympathetic to these changes?

Spieth: These sortsof changes are perhaps inevitable. If you are going to run a large sized university with external support through grants, gifts, and agencies, then you have to pay a great deal of attention to your supporting constituencies and meet their rules and regulations.

Brienes: Is there any realistic alternative?

Spieth: I see no realistic alternative in a mass society that depends upon higher education to the extent that present-day society does, but I dislike the situation because I think it carries the seeds of dry rot. Of course, universities have undergone dry rot in the past.

Brienes: Yes.

Spieth: All one needs to do is to consider, for example, the history of the University of Padua.

Brienes: Well, I don't know what happened with Padua in Italy.

Spieth: At one time it was probably the greatest university in all of Europe.

Brienes: What do you think the prognosis is for the future? Dry rot, as you say? Is that where we are headed?

Spieth: I don't really know; one can never predict the future with certainty. There are always surprise turns that haven't been anticipated. I do not believe that we can go back to the small, intimate, cohesive universities of, say, the '20s and '30s, but the present bureaucracy-ridden campuses, dominated often by totalitarian liberals and non-academic personnel, are clearly denigrating faculty control and wisdom.

Brienes: You have said that because of the demands that democracy makes, there has been a democratization of higher education, of letting in many, many people who never would have been considered eligible in the past.

Spieth: They would not have considered thinking about it themselves.

Brienes: And they wouldn't have had the opportunity even if they had. On balance, would it be true to say that the general level of competence has fallen?

Spieth: It depends upon the institution. If you have an institution in which anyone who graduates from high school can go into higher education, I think probably the general level of competency of its student body has fallen. There are, however, some institutions which can still be selective, such as the University of California which operates under California's Master Plan for Higher Education. Some of the private institutions can still be selective simply because they have a small number of openings in each class and many applicants who desire to go to such places. In such cases I do not believe that the quality of the student body has decreased greatly. In comparison, I am sure that the quality of the student body at the City University of New York is far below what it was when I was teaching there -- although fortunately there has been some change to upgrade the quality of the students admitted there in just the last year.

Brienes: I think now they have to be able to hold a pencil in order to be admitted. [laughter].

Spieth: What happened at CCNY was educationally a criminal act of great magnitude. One of, if not the best, undergraduate institutions in the country was destroyed by open admissions and turned into an educational slum. At the University of California our student body is still made up of competent individuals. In biology, at any rate, we see little regression because of the simple fact that so many of our students hope to enter one of the professional schools which have demanding entrance requirements -- and that means the students are truly dedicated to what they are attempting to do. For institutions such as this campus, I do not think the quality of the student body has changed dramatically. But across the country the total student body is of much broader spectrum and lower abilities than was true in the first few decades of this century.

Brienes: You were speaking about the fact that the mores of society has now a greater impact on the university than it ever had before.

Brienes: Is the reverse of that true? Does the university now have a larger impact on the greater society than it ever had before?  
 Brienes: And if it does, what is the quality of that impact?

Spieth: I would not like to prognosticate. The university is producing a by far larger percentage of highly skilled individuals in various fields, indeed in the majority of fields of social endeavor. In the society in which I grew up, even during my college years, many individuals achieved prominence in some areas without the benefit of a college education or without more than a year or two. There were, for example, many doctors practising when I was a small boy who had never had more than a high school education and two years of medical school training. There is a law, to the best of my knowledge still on the books in the State of New York, that you cannot practice medicine in that State unless you are a high school graduate! This law was obviously passed back in the days when they were trying to upgrade the quality of medical students by making them at least graduate from high school before entering medical school.

Spieth: This law also applied, or one similar to it did, to those who wished to vote in New York. If a would-be voter could not produce a high school diploma, he or she had to take a literacy test. It might amuse you to know that in 1932 when Evelyn and I went to register to vote in New York City, we did not have our high school diplomas. It did not suffice that we had college diplomas. We had to go to a local school, sit in the benches of primary school students, and take a test to prove that we could read and write. [laughter].

Brienes: I would like to turn to a little bit of your personal life to get more coverage on that. Maybe we could start with a little more family history. For example, when you moved to Davis, did Evelyn become active in the community with any organization of any sort?

Spieth: No, not really. She says she "retired" upon coming to Davis. We both felt by that time that we were ready to lead more restricted lives. She joined the Farm Circle, the Prytanean Alumnae and the Phi Beta Kappa chapter that was formed at UCD some time after we came here. She did not involve herself with the League of Women Voters as she had in the East and in Texas. There was nothing here like the Settlement House in Riverside and she did not become involved in affairs in the city.

Brienes: The only knowledge I have of her work here is making use of her talents in English and I know that she did do some work with the Oral History Center.

Spieth: She has read a number of oral histories.

Brienes: How did she get involved with the Oral History Center at Davis?

Spieth: I believe the Center asked, through the Farm Circle, for assistance and she volunteered to do some editing. She had done some editorial work over the years at Indiana University and CCNY, and was co-author with Fernandus Payne on a book on higher education entitled "An Open Letter to College Teachers". She was interested in the preparation of manuscripts and so she offered her services to the Oral History Center.

Brienes: Yes, didn't she work on the Tracy Storer memoir?

Spieth: Yes. Tracy had asked her to read the autobiography he was writing even before it was made a part of the Project's list of memoirs.

Brienes: Has she worked on any others?

Spieth: Oh, she has worked on I suppose about a dozen.

Brienes: Now sometimes off the tape you have told me of your regard for her writing talents and editing talents, and you usually have put that in the context of your own lack of abilities in that area. I have gotten the impression a little -- you haven't directly said it -- that she has, in a sense, been a collaborator on some of your own publications. Is that true to any extent?

Spieth: This is quite true! [laughter]. There have been a number of ways that she has been of invaluable assistance. One is the fact that she has the ability to type as I talk.

In New York, of course, we faculty members had no secretarial help whatsoever in the department. So Evelyn and I developed the system whereby I would dictate letters or manuscript material, and she would type out what I said as I talked. It is a speedy way to work. At Riverside I had adequate secretarial help in the office, but letters that I thought needed special attention I would bring home and we would work them out together. This we still do; we've done it for forty-eight years. I don't think I have ever published a scientific paper that she has not reviewed the text thereof.

Brienes: Has she ever demanded co-authorship?

Spieth: Oh no. [laughter] She has never demanded co-authorship.

Brienes: Has Evelyn done any creative writing on her own? for publication?

Spieth: None except the book with Payne. When we first went to New York, she was working on her doctorate, but she also worked full time at CCNY. She did enroll in a number of courses at Columbia University and completed most of the course work for her degree. At Indiana University she had selected a topic for her thesis. In hindsight I can see that it was one of those things that ambitious graduate students try to do and which had too large a scope. Her topic was the effect of the Industrial Revolution on Victorian writers. This would have been a reasonable Ph.D. program if she had limited it to the effects of the Industrial Revolution on Dickens or Hardy or Mrs. Gaskell, or any other specific Victorian writer, but to attempt to accomplish what she planned was a herculean task that would have taken the rest of her lifetime to complete -- and her committee of professors should have known this.

Her experience confirmed my opinion that work for a doctorate is for the purpose of proving to yourself, your faculty mentors and your peers that you are capable of accomplishing scholarly research and have the capacity for making further contributions in the years ahead. Therefore the project for a thesis should be limited and compact, but sufficient to prepare you for future scholarly studies.

World War II and its attendant dislocation in our lives prevented Evelyn from completing what she had started and had well under way. For this I am sorry.

Brienes: Really?

Spieth: Yes. I chose September for several reasons. By that date the major agricultural harvests would be completed, and, secondly, the climate and dryness of the terrain would be such that armies and especially tanks could maneuver effectively. I surmised that Hitler would use the celebration on September 14 of the famous WWI battle of Tannenberg as the date for commencing hostilities. As you know, I missed my guess by two weeks.

We changed our plans and decided to go directly to England to accomplish research, and then go to the continent to visit Paris, Austria, and Germany, especially Munich and then Stuttgart with a visit to my family's ancestral home at

Spieth: Oostmaringen, and finally down the Rhine to Holland. We changed from the British boat to the Holland American line, since we judged that although Holland would be caught up in this war eventually, it would not be involved at first. We set our departure from Holland for September 5 on the Statendam. Going over, we managed to get passage on the Volendam, a smaller vessel. In those days travel was not checked by the British, so we were able to take the summer travel season.

INTERSTICES: OTHER THINGS, OTHER PLACES

### Sabbaticals

Brienes: How many sabbaticals did you have during your career?

Spieth: Four. The first one was in 1939-40 when I was studying Mayflies. A famous British investigator by the name of Eaton had placed specimens of the various species he had studied, including many North American species, in the British Museum of Natural History. My investigations had reached a point where I needed to study his material. In the fall of 1938 we decided to take the summer months of 1939 off from CCNY for travel in Europe. Evelyn would then return in early September to New York and her job, and I would remain in England to study there and then later go back to the continent to study some of the material in other museums. At that time we booked passage on an English ship. By January of 1939, however, I became disturbed about these plans since political tensions had developed in Europe to an ominous degree and I came to the conclusion that Hitler would go to war in September.

Brienes: Really?

Spieth: Yes. I chose September for several reasons. By that date the major agricultural harvests would be completed, and, secondly, the climate and dryness of the terrain would be such that armies and especially tanks could maneuver effectively. I surmised that Hitler would use the celebration on September 14 of the famous WWI battle of Tannenberg as the date for commencing hostilities. As you know, I missed my guess by two weeks.

We changed our plans and decided to go directly to England to accomplish research, and then go to the continent to visit Paris, Austria, and Germany, especially Munich and then Stuttgart with a visit to my family's ancestral home at

Spieth: Oberesslingen, and finally down the Rhine to Holland. We changed from the British boat to the Holland American Line, since we judged that although Holland would be caught up in this war eventually, it would not be involved at first. We set our departure from Holland for September 5 on the Statendam. Going over, we managed to get passage on the Volendam, a smaller vessel. In those days travel was exclusively by sea and February was a late date to make reservations to travel to Europe during the height of the summer travel season.

We left New York on June 21, landed at Plymouth, saw the Green where Drake had bowled, so the story goes, before he set out to defeat the Spanish Armada; then on to Tintagel...; to see King Arthur's Castle (now said not to be the place where he was conceived but an interesting place), to Clovelly...; with its donkeys carrying burdens up and down its steep, narrow paths, Bath with its Roman baths, Salisbury with its magnificent cathedral (my favorite), Exeter, and so forth to London. At Wells we stayed overnight in a Thirteenth Century home in the Vicar's Close where candle light and no plumbing still were the rule. We visited Old Sarum and Stonehenge. All along this route we had High Tea of Devonshire clotted cream and huge red raspberries.

In London we lived in a small pension at 28 Queen's Gate where we had previously made reservations. Richard Blackwelder, a member of the Entomology Department at the American Museum of Natural History, had helped get our reservation. His father, a member of the Geology faculty at Stanford, had stayed there and interceded on our behalf.

We arrived in the late afternoon and since we had arranged to have our breakfasts and dinners there, we looked forward to dinner that first night with considerable eagerness as a chance to see and meet the others living in the place. Blackwelder had told us that we would probably be the only Americans since most of the people who customarily lived there were retired English, colonials who were returning to England for a holiday, or possibly some English white collar workers.

In the dining room the owner and his wife presided at a large oval table in the center of the room and smaller tables were located along the margins of the room. We were given a smaller table by ourselves. That first evening there was scarcely a sound during the entire meal. It was clear that we were the only Americans, and that the natives were sizing us up. We couldn't dare to carry on a conversation. Evelyn

Spieth: immediately nicknamed one chap as Mr. Pickwick, not only because of his jolly round face and baldish head but also because of his attire: wing collar and all. Breakfast the next morning and dinner in the evening were the same as the day before. Evelyn opined (in the safety of our own pleasant big room) that she was ready to scream at the next meal -- and see what would happen. When we walked in for breakfast on the third day, Mr. Pickwick raised his head, looked over his London Times, and boomed out a hearty "Good morning!" We had been accepted. From then on the dining room buzzed with conversation at all tables.

Evelyn had decided to spend her time that summer in pursuing her research on British authors and the effects on them of the Industrial Revolution at the British Museum in Bloomsbury. She spent her days there, and I spent mine at the Natural History Museum near our pension. On weekends we saw something of London and did make a few excursions such as to Kew Gardens, Hampton Court, Oxford, and so on, but other than that we both worked.

At that time the Irish were planting bombs in England, and Evelyn was searched each morning as she entered the British Museum even though she had a permit given her by the Director of the Museum. The Irish apparently had scant interest in natural history and people entering my Museum were never searched.

My studies were rewarding, resulting later in two publications, and I had the pleasure of learning to know some of the British scientists whom I met at the Museum.

We were to leave London for Paris early in August. A couple of days before our departure, I totally missed a valuable clue. A British Army major assigned to the British War Office lived at our pension, and he asked me when we would be sailing from Rotterdam for New York. I replied, "September 5". He then casually remarked, "It will be pretty hot by then". I should have caught the significance of his remark, for all during our stay in London barrage balloons had been flying over the entire area and we had experienced the first blackout drill (which was a flop, for everyone just turned out lights and leaned out the windows). If I had caught what he was trying to tell me, we would probably have cancelled our trip to the continent.

We enjoyed Paris, went to Chartres, repeatedly visited the Louvre and Sainte Chapelle, heard Siegfried sung at the opera,

Spieth: spent an evening at the Alcazar, lived in a tiny French hotel named Nicholas and Madelein, famous from World War I days when American troops had been stationed there. We also ate superb French food in a tiny obscure restaurant called Chez Moi. An aunt of Jane Davenport Harris (our dear friend at Cold Spring Harbor, L.Is.) lived in Paris and she showed us parts of Paris many tourists were unfamiliar with.

From Paris we went via train through Switzerland to Zurich, where we celebrated my birthday in a restaurant a few feet across a narrow street from Charlemagne's Cathedral. The next day we went on to Igls, a tiny Austrian village high above Innsbruck. In Innsbruck we caught our first view of the German army. That night when we looked out of our hotel windows at Igls, we were astounded to see huge swastikas illuminated in glaring lights all around on the distant mountain slopes. We and two rather boisterous girls were the only English speaking guests in the midst of a sea of vacationing Germans and Austrians. We noticed that first evening that the Germans listened intently to the radio and appeared greatly concerned about what they heard. Neither of us used German fluently enough to understand what was occurring.

The next afternoon, after climbing the mountain for a magnificent view, we learned from an Austrian about the German-Russian Pact signed on August 22 (the day before). That evening we went to the manager of our hotel and told him that we found it necessary to go on to Munich the next morning. He also told us about the pact and tossed me a coin, saying as he did so, "Do you want to see some Polish money?" It was a German Reichsmark. We asked why Germany wanted to conquer Poland and he gave us a lecture, saying that the land belonged to Germany and that our American textbooks were written by those who knew nothing of European history.

Brienes: He must have been an ardent Nazi.

Spieth: Obviously, but his statements confirmed the validity of our decision to leave and at once. We took the earliest bus to Innsbruck the next morning, reached Munich and went to the American Consulate. The Consul was concerned but not alarmed, or so he said. Munich seemed utterly peaceful with an enormous amount of construction going on. We did some sight seeing and that evening went to the opera to hear a magnificent performance of Tannhauser, the most magnificent I have ever heard. The next morning we checked in again with the

Spieth: American Consulate, cashed some travelers' checks, and went to the railroad station where I was given a pencil written border certificate (just a note on the railroad tickets we had bought for seeing Central Germany). We then visited Der Alte Pinakothek and saw among other things Durer's superb Four Apostles, a painting I shall never forget. About one-thirty that afternoon we returned to the Consulate and were advised to leave Germany at once; the British and French consuls had advised their nationals to leave the day before!

We had dinner at the Gothic Ratskeller and then boarded the train for Stuttgart where we were to change trains, getting the International Line from Milan to Rotterdam. The train to Stuttgart was crowded but pleasant. Passing Ulm which we had planned to visit we could see the beautiful cathedral bathed by spotlights. Stuttgart was another matter.

A huge crowd was waiting to board the Milan-Rotterdam train, and the crush of Germans trying to get home from vacations was frightening. We had had the foresight to travel from England with only two suitcases and two top coats. We decided Evelyn should scoot or wriggle ahead carrying the coats and I would try to get on the train with the suitcases. She was caught in a crush of anxious people and carried on board the train, literally off her feet and propelled by those around her, and became wedged in the middle of the narrow aisle of a car. By simple brute force, I finally managed to get on the steps of that car as the train started moving, and eventually inched into the vestibule. We've often wondered how different our story might have been had I not gotten on the train, for Evelyn had almost no German money and I had our passports.

It was quite a night ride -- in brilliant, beautiful moonlight. The Germans were mobilizing and at each station we stopped to take on men in civilian clothes, ranging from young boys to men of around 55 who were reporting for duty. They were telling their sweethearts and families goodbye and squeezed on the over-packed train with tears in their eyes. Soon they began singing -- all too obviously to regain their spirits.

Although some people left at some of the stops, more and more were crowded on. Confusion reigned. No one ever asked us for a ticket. The next morning we finally reached Cologne. As the train slowed to a stop, a woman near Evelyn, with tears streaming down her face, looked at the mobs of soldiers on the platform outside and exclaimed: "Ach, mein Gott, die militarie!" We were the only two who did not leave the car and finally we

Spieth: could sit down after some fourteen hours. As our train crossed into Holland, the border was closed. For the next several weeks, no trains crossed again. We managed to get what we were told was the last available hotel room in Rotterdam, at the (to us) expensive Atlanta on the Coolsingl, and we settled down that August 26 anxiously to await the sailing of the Statendam on September 5.

Brienes: So far you had been extremely lucky.

Spieth: No question about that, but we still had real concern whether the Holland American line would be able to get the Statendam back to Rotterdam from New York, and, secondly, if she did arrive whether they would be willing or allowed to sail her back out onto the Atlantic. During our waiting period the Athenia was sunk. Holland was also mobilizing but their artillery that I saw consisted of horse-drawn 77 mm guns of World War I vintage. All trains had been commandeered for this and only a few buses were available for the public. We did take a bus to Amsterdam one day, but all the museums were either closed or, if open, had only a few items on display. The art treasures had been buried. I bicycled to Scheveningen, 60 kilometers round trip. We both had bad colds so mostly we sat, slept, read, and talked to the numerous other Americans, many of whom had still greater difficulties than we for they had tickets on English or French boats -- or no tickets at all. There were many heartbreaking stories.

The Statendam did arrive and at 1:30 a.m. on September 6 we went aboard. The ship was a mad house, much, much overcrowded with many Spanish and Jewish refugees, and some people found their rooms occupied by "squatters" without tickets. I found the key rack for our section of the boat so I grabbed the key to our stateroom and told the steward later that we would care for the room ourselves. He was furious but I refused to give up the key. When morning finally came, we were still at dock in Rotterdam. About half of the crew had refused to sail; some fifteen were locked up in the brig. Finally late in the morning we sailed with half a crew. That night the boat stopped in the English channel, dropped anchor, extinguished all lights, and sat. The next afternoon we reached Portsmouth where passengers from England had been waiting on a barge since early morning. The channel was full of English warships, with a submarine boom across the harbor, and ships of all nations and of all sorts awaiting clearance by the English. Our baggage, including my microscope and all of our research notes (all of which had been stored in England when we went to the continent), miraculously were put on board! Few others were so lucky.

Spieth: That night we sailed at full speed ahead, with the ship fully illuminated, search light included. The next day I suddenly realized that we were headed south instead of west. The crew professed ignorance, but finally the bartender admitted that we were off course to pick up the crew of an English freighter that had been torpedoed by a U-boat, somewhere near the Azores. The captain of the U-boat had allowed the crew to get into life boats and after sinking the Winkleigh he broadcast its position so that the nearest vessel could come to rescue the crew. In the late afternoon the Statendam hauled the shivering, scared, exhausted men plus a little boy out of the lifeboats and on board and we took them to New York with us. How they finally got back to England we never learned.

We had half a crew and almost twice as many passengers as the Statendam normally carried. American college boys took over as waiters and helpers, but the food was barely passable; Evelyn ate only oranges that could be peeled. The bar was good. We reached New York on September 14. Evelyn had lost ten pounds and I had lost fifteen, but Mother Wilkinson who was waiting at home in New York for our return had lost twenty.

Brienes: Quite a summer and one that you will never forget.

Spieth: I can still remember with clarity the events of that summer. I was quite relieved to be safely back home but I quickly became distressed, even infuriated, at the behavior of the American public.

Brienes: I don't understand. Why?

Spieth: I had assumed that Americans would quickly realize the implications of the German-Russian pact, especially after the startling and rapid victories of the Germans in western Europe. Instead, especially from so-called "liberals" and many others, including even some senators and Congressmen, came an outpouring of writing and speeches devoted to keeping us not only from entering the war but also to prevent the sending of military and other supplies to England and France. They were joined by the miserable Communists who did a flip-flop at Stalin's orders. This created some strange bedfellows. To me it seemed crystal clear that Stalin and Hitler intended in 1939 to conquer, enslave, and divide Europe and utterly destroy England. I thought any semi-intelligent American would understand that such an outcome would be a disaster for the United States. President Roosevelt, a man whom I did not by then exactly admire, fortunately seemed

Spieth: to realize the gravity of the situation and was able eventually, by a one vote margin, to supply aid to England in the form of destroyers and other materials. I still think that we should have entered the war in the fall of 1939 and that the world would be a much safer and saner place today if we had done so.

I would make this addendum: On Sunday, December 7, 1941, I took my Field Biology class on a trip to the coast of the Pine Barrens near Lakehurst, N.J. We left New York City by train early that morning and, as was my daily custom, I picked up a copy of the New York Times. In it I read as we rode along a succinct and lucid account of what had occurred diplomatically between the United States and Japan during the preceding week. I turned to the students sitting beside me and said, "I'm glad to read that the President has finally maneuvered the Japanese into a position where they will have to put up or shut up". If the Japanese leaders had not been so stupid as to declare war, I have doubts that America would have awakened to the danger facing it in Europe until it was totally too late. When we returned that Sunday, after a very successful field trip, to the railroad station located in a small New Jersey village we were dirty, carrying various knapsacks and other gear. For a time I thought we might be arrested as suspected saboteurs thought to have just landed on the beach. Not until we learned about Pearl Harbor did we realize why the villagers took such a menacing attitude.

Brienes: World War II surely interrupted what had been planned for your first sabbatical, did it not?

Spieth: It surely did. After our return from Europe, I spent the remainder of the year first in visiting a number of museums and universities in Canada and the United States and then, secondly, at the American Museum of Natural History in writing a number of papers based on data acquired at the British Museum and elsewhere.

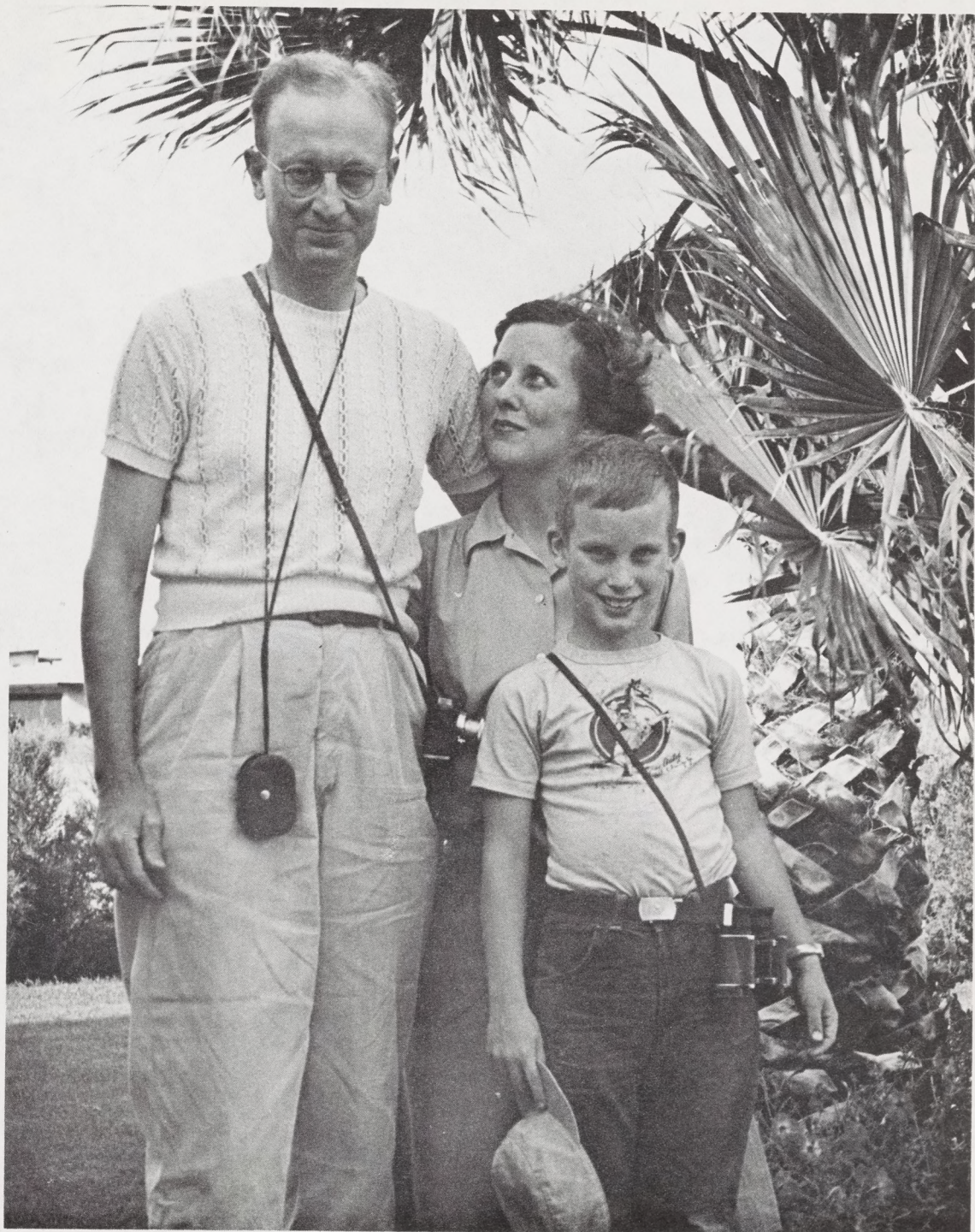
Brienes: Was your second sabbatical as strenuous as the first?

Spieth: No, not at all, but it had important side-effects on our lives. We spent the academic year 1949-50 at the University of Texas, and it was a truly rewarding year for all of us.

Robert Wagner, one of my outstanding students at CCNY, was a member of the Zoology Department at Texas; Osmund Breland, who had received his doctorate at Indiana University

on a collecting trip to the Southwest

Spring, 1950



Herman, Evelyn and Philip Spieth  
on a collecting trip to the Southwest  
Spring, 1950

Spieth: under Kinsey a few years after I had, was also on the faculty. Housing in Austin was still limited after the War had ended, but these good friends found us a pleasant, new apartment near the campus, and near the Robert E. Lee school where Philip entered third grade. He quickly made friends with youngsters in the area, and especially with John Threadgill who lived in an apartment below ours. His parents, Colonel and Mrs. Threadgill, are delightful people and became our cherished friends. That was the year that we really became acquainted with and close friends with the Wilson Stones.

Evelyn enjoyed auditing some courses at the University and I accomplished more research than during any other comparable period of my life.

An added bonus was that in April the family accompanied me on a collecting trip to the Southwest through Texas, New Mexico, Arizona, and southern California, including Riverside where we had a reunion with the Melanders and visited the Citrus Experiment Station.

Before leaving these personal pleasures, it might be worthwhile to include this little story. Phil's teacher at Maugham School in Tenaflly had thought us very unwise to take him away from his school for one in Texas at the tender age of eight. She gave Evelyn the syllabus of work expected to be completed in third grade at Maugham School, and Evelyn promised to do any tutoring that might be necessary to keep Phil abreast of his classmates at Maugham. It turned out that he had an excellent teacher at Robert E. Lee School, who eagerly read the syllabus and did all she could to supplement her own program for his benefit. At the end of the year, she asked to keep the syllabus for a reorganization of the program at Robert E. Lee school.

My only concern about starting the sabbatical in 1949 involved financial implications. CCNY, like most other institutions then, paid only half salary for the period of a sabbatical. Obviously our expenses would be fairly large. Fortunately the University of Minnesota Department of Entomology offered me a summer job. We spent the summer of 1949 in St. Paul where the agricultural campus is located, and lived in the home of Dr. and Mrs. William Marshall. Glenn Richards, a friend from the early days at CCNY, was a member of the Minnesota Entomology Department, and we enjoyed many interesting times with this stimulating man and his family.

Spieth:

I was invited to return the following summer, not only to teach on the St. Paul campus during the first session but then to go to the Biological Station at Lake Itasca Park to teach Field Zoology during the second summer session. The Park is a seven square mile area of virgin forest which includes the lake. A small stream issues from this lake. In the early Nineteenth Century, Schoolcraft, a student of the Indians of the area, visited the lake and realized that the little stream was the beginning of the Mississippi River. Since it was the veritas caput of that mighty river, he used the last four letters of veritas and the first two of caput to coin the name for Lake Itasca.

A scientist named Shantz-Hansen was Director of the Biological Station, and Bill Marshall was an active faculty member who later became Director of the Station. Ace Chandler from Rice Institute, Clyde Christensen from the University of Minnesota, Murray Buell from Rutgers, and a chap named Eddy from the Minnesota campus completed the list of seven faculty members that first summer. They were all outstanding scientists in their respective fields and it was stimulating to exchange ideas with them.

The faculty and their families lived in small rustic cabins with wood-burning stoves and with ice boxes filled with ice cut from the lake during the winter and stored in sawdust in the ice house until needed.

The students, some undergraduates but most of them graduate students, came from various institutions in various states. Itasca was thus an inland station comparable in many ways to the marine station at Cold Spring Harbor.

In addition to teaching, I immediately began to collect Drosophila. One species appeared in abundance. It and its close relatives which live in various parts of Europe, Asia and North America are known as the virilis species group. Patterson and Stone at Texas had for a number of years intensively studied the genetics, chromosomes and evolution of the group. Other investigators also were using it for study. At Texas I had studied the behavior of the various species and had discovered some important data about their evolution. To interpret their data, all investigators lacked one key element at that time, namely, we did not know where the females laid their eggs and what the larvae used as food. By luck I found that the species at Itasca used the rotting bark of the aspen trees. Other investigators used this lead and today we know where all of this species lay their eggs. Each uses a different rotting bark such as willow, cottonwood, alder, and sycamore.

Spieth: Itasca was a wonderful place for all of us. We could ask Phil to chop wood for the stove; he and his friends found all kinds of interesting animals in the forest and in the lake. Wild rice grew at the headwaters of the Mississippi. Racoons visited us often. One could find lady-slippers and delectable blueberries in the forest. There was canoeing and there was swimming.

The Marshalls had two sons, Guy and Allen, who became very close to Phil. In that calendar year Phil had developed especially close ties to John Threadgill in Texas and with Guy Marshall at Itasca. Their relationship continued through the years, as did that of their parents. John eventually entered Rice Institute and Guy the University of Minnesota. One of the bitter ironies of fate is that both of these young and gifted men, through no fault of their own, were murdered by drunken drivers.

Brienes: Terrible tragedies.

Spieth: Truly. What is more maddening is that the deaths were caused by carelessness.

Brienes: Your third sabbatical must have been the year after you left the chancellorship.

Spieth: Yes, and I have talked about that earlier. The fourth was in 1971-72 which was spent in residence at Davis and in Hawaii.

Brienes: Your sabbaticals appear to have been invaluable to your career and the lives of your family?

Spieth: They certainly have been. From my own experience and that of other faculty members, I feel that sabbaticals are vital and necessary elements of a faculty member's competence. More importantly perhaps, they result in enhancing and improving the educational quality of our institutions of higher education. Administrators at all levels should urge the faculty to take sabbaticals regularly.

Brienes: I am curious. When you were on your second sabbatical at Texas, did you take the opportunity to visit Mexico?

Spieth: Why yes; actually we did take a short sightseeing trip to Monterrey and Saltillo in northern Mexico. I particularly wanted Evelyn and Philip to see Saltillo which I had found delightful in 1947 when I had been on an extended collecting trip to the high plateau country of Mexico.

Brienes: What trip was that?

Spieth: It was the David Rockefeller Expedition. David, the youngest son of John D. Rockefeller, Jr's, had been interested in insects from the time he was a small boy. His father took him to the American Museum where Frank Lutz, then head of the Department of Entomology, took him under his wing and David spent much time at the Museum. Lutz and he made a trip to the Grand Canyon where the two of them made a large collection of insects. Young Rockefeller for a time gave serious thought to becoming an entomologist but eventually decided to study economics. He retained his interest in entomology and in 1947 Mont Cazier, by then head of Entomology at the AMNH, induced him to provide funds for a major collecting trip into the high Mexican plateau that lies between the Sierra Madre Occidentalis and Orientalis. In addition to Cazier, who specializes in beetles, the group included Willis Gertsch, spider man, Charles Michener who studies solitary and social bees, Rudy Shaamal who was the technician for the Department, and me.

We had a Chevrolet carryall plus two Jeeps, each of which pulled a small two-wheeled trailer. In addition to collecting and personal equipment, we had a tent and all necessary equipment for camping, down to a fifty gallon drum for our water supply.

The trip lasted thirteen weeks. We drove rapidly from New York City to El Paso where we entered Mexico. Some sections of the Pan American Highway were graded but unpaved. Other parts were quite primitive, and we also often departed from the main highway. Except for a few nights, we camped outdoors. South of Chihuahua we turned off the road to spend several days at the huge Hearst ranch. At Santa Barbara, a mining town near Hidalgo del Parral (Pancho Villa's home town), we stayed with George and "Sis" Bradt who together comprised the faculty for the school for children of the American manager and other employees of the mine. At Durango we stayed in a local hotel for a couple of days.

We went as far south as Zacatecas, then back northward to Torreon, Saltillo, and across the border at Eagle Pass, Texas.

I served primarily as photographer, historian, and general collector, but I did collect living Drosophila pseudoobscura for my good friend Dobzhansky who badly needed stocks from the areas we covered. Unfortunately most of the collections when they reached New York via air mail contained only deceased flies --

Spieth: a fact that was totally due to the dereliction of the American Agricultural inspectors at the border. We had strong suspicions that it was done deliberately, although I had adequate government permits for the importation of the flies. Finally I left the group long enough to fly back to El Paso with a large and important collection to see them through inspection personally. These flies reached New York City in good shape and I am grateful I can say they contributed key information for Dobzhansky. I then flew back from El Paso to rejoin our team.

It was an interesting and valuable trip. We collected about 70,000 to 75,000 specimens, and I took over a thousand pictures -- twenty rolls of Kodachrome and twenty rolls of black and white, all of which were good and some excellent. Interestingly the Kodachromes are as bright today as they were when first developed.

During my prolonged absence, however, Evelyn had had a trying summer. Philip developed an acute case of mononucleosis and was in bed most of the summer, and an accidental fire had occurred in our home which, fortunately, was exterminated quickly and without serious damage.

There are many parallels between the Hawaiian Islands and the Galapagos Islands which were so important for Darwin's studies. I can also point out that the total land area of the Hawaiian Islands is less than that of the state of New Jersey.

The intriguing question, of course, is why and how so many species evolved from a single ancestor on these tiny, isolated islands.

Stone and Hardy realized that the answers would be complex and perhaps elusive. They therefore brought together a group of individuals who were specialists in various aspects of drosophiloid biology. The first group consisted of Harry Stalker and Hampton Carson from Washington University in St. Louis; Lynn Brockmorton of the University of Chicago; William Reed from the University of Arizona; Frances Clayton of the University of Arkansas; Marshall Wheeler from the University of Texas, and myself from the University of California.

Subsequently many people from various parts of the world have participated in the project. For the collecting of flies

Spieth: The Hawaiian Drosophila Project

Brienes: You indicated earlier that Hawaiian Drosophila are unique and I know that you have often gone to Hawaii to study them. Can you tell me why?

Spieth: It would take pages to do justice to answering your question. There are in the entire world probably 2,000 different kinds of Drosophila, that is, different species. At least twenty-five percent of these are found only on the Hawaiian Islands. Now these islands are solely volcanic in origin and have never been connected to any continent. Therefore all the creatures that live there reached the islands either through the action of wind or water currents. We know that the first men to reach the islands, that is the Hawaiians, reached there only a couple of thousand years ago at the most. When they arrived, they found dense forests, a number of beautiful birds, insects, spiders, but no snakes, no frogs, and the only mammal was the rat. The ancestors of all the creatures that were there arrived accidentally.

One of these successful migrants that arrived perhaps ten to fifteen million years ago was a species of Drosophila, probably a single fertilized female. From this single introduction all the present five hundred plus species have evolved.

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Spieth: in the field and their maintenance in the laboratory, many undergraduate and graduate students have been involved over the years. Just recently I wrote a short history of the project and I found to my surprise that almost two hundred people have been involved at one time or another.

Spieth: Innumerable publications have resulted from these studies, and we have found many of the answers to the questions we posed, but usually each answer opens up a new area of investigation. Many of the answers we have gained have been of great value in explaining how evolution has occurred also in other parts of the world.

My own particular studies have been concerned with the courtship behavior of the organisms and how this has been involved in the evolution of the species.

It was a great day when the project was funded. I, of course, go to Hawaii repeatedly and have done so for the past fifteen years.

I heard nothing for a month or two, and I really did not expect to hear anything for I had earlier tried to enlist as an entomologist but was turned down because I was too skinny. At that time I weighed in at 132 pounds.

Then one day I got a telegram from the President of the United States, telling me to report to Miami Beach for Officer Training School on a date one week away.

Brian: Officer Training School?

Spieth: Yes. As I said, the telegram arrived just seven days before I was ordered to be in Miami. Amongst many other things that had to be done that week, it was necessary for me to acquire uniforms and other items listed in the papers provided me. The father of one of my students was a tailor who made the uniforms in that short week. I reported to OTC in Miami in early February.

I left Pennsylvania Railroad Station in New York early in the morning just as the city was coming to life. Evelyn accompanied me from our home in Brooklyn to the station. When we reached there, just as it was getting light, much to our surprise and comfort all the members of my little beach group were there to see me off, bringing gifts and good wishes.

Brian: What year was that?

World War II

Brienes: As I recall, your teaching career was interrupted by World War II.

Spieth: That is certainly right.

Brienes: How did that come about?

Spieth: It happened because a Colonel Wise of the Air Corps came to CCNY and explained that he was looking for faculty members who would be willing to join the Air Corps as teachers on various bases in this country where pilots were being trained. After he had set forth his problems to an assembled group, he stayed over longer to talk with some of us. I told him what my background was and suggested that if I could be of any help I'd be happy to do so, but if I were not suitable for his purposes, why, forget about it. He said, "Well, you might as well fill out the documents". And I did.

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Brienes: Officer Training School?

Spieth: Yes. As I said, the telegram arrived just seven days before I was ordered to be in Miami. Amongst many other things that had to be done that week, it was necessary for me to acquire uniforms and other items listed in the papers provided me. The father of one of my students was a tailor who made the uniforms in that short week. I reported to OTS in Miami in early February.

I left Pennsylvania Railroad Station in New York early in the morning just as the city was coming to life. Evelyn accompanied me from our home in Tenafly to the station. When we reached there, just as it was getting light, much to our surprise and comfort all the members of my little seminar group were there to see me off, bringing gifts and good wishes.

Brienes: What year was that?

Spieth: It was 1943. I spent six weeks in officer training. Then we were sent to Montgomery, Alabama, to be assigned to particular fields or bases. We were assembled in a big room and the officers in charge called out names, and we would go to the front for a captain to give us our assignments. When I went up, the captain said that there were only two kinds of assignments available, one for teaching navigation and the other for meteorology. I suggested to him that I knew nothing about navigation and the only thing I was semi-fit to undertake was meteorology. He replied, "I want you to do navigation". And I said, "I am just not prepared; I don't know anything about navigation". He said, "I want to send you to Cochran Field, Macon, Georgia. It's a nice field and you will enjoy it". Finally, after arguing a little bit more I said, "Well, you're a captain and I'm a lieutenant so I guess I'll have to obey orders". And off I went to Cochran Field outside of Macon which at that time was a small town and a pleasant one.

I reported in and was sent to the Ground School where I met Major Huff, head of the Ground School. The man who had been teaching navigation was leaving within three days. A new class was coming in. Each class was on base for two months, and for navigation we had the cadets for one month. The second day I was there, somebody came up and said to me: "You'd better go down to headquarters; the Executive Office wants to see you". I thought, "My God, what have I done wrong -- already?" [Laughter].

Brienes: Trouble?

Spieth: I went to headquarters. The executive officer who greeted me was Colonel Wise, the same man who had interviewed me in New York. Then I understood why I was assigned to Cochran Field.

Brienes: And you had three days to learn.....

Spieth: .....how to teach navigation. [Laughter].

Brienes: You knew what it was, though, didn't you?

Spieth: I knew what the name was. I knew a little bit, oh, very, very little. I went down to the flight line and said to some pilots there: "Somebody take me up and show me what the kids have to see". The flying officers were amazed -- amazed that any ground officer would make such a request.

Brienes: I see.

Spieth: One of them said, "Sure, I'll take you up". And he took me up in a BT-13 which was the training plane used at a Basic School such as Cochran. Our students, more correctly "cadets", came to us from one of the Primary Flight Schools, which were civilian contract schools. Before reaching Primary School, they had gone through basic military training in the Army because the Air Corps was a part of the Army at that time.

Brienes: The Primary School was for initial flight training?

Spieth: Yes. That's where they learned to fly. They used a simple little plane there. When they got to Basic School, this was their first chance to fly a military plane, and the BT-13 was designed particularly for this purpose. It was a two-seater plane; the cadet sat in front and the instructor sat behind; both of them had controls. The flight instructors were usually second and first lieutenants. It was one of them, a first lieutenant by the name of Ronald Scott, who took me up and showed me what the student saw from the air.

Much of the training occurred near the base but they also had cross country flights on which each cadet went alone. He had to fly to a certain point, turn around, and return to the base. The flights usually resulted in some cadets becoming lost, and the number of those who had been lost had been high on some of these flights. There were auxiliary fields scattered around where the cadets could make emergency landings when they were unable to find their way back to Cochran Field.

Brienes: I understood that when you said "lost" you meant "crashed".

Spieth: No, no.

Brienes: You meant that they had just gotten lost.

Spieth: Yes. This was not uncommon. You remember Lindberg went to Mexico after he returned from his trip across the Atlantic to Europe, and he became lost, arriving in Mexico City a couple of hours late.

Brienes: I didn't know that.

Spieth: When I arrived at Cochran Field I lived in the BOQ (Bachelor Officers' Quarters) on the field. I had nothing to do except to work on navigation. I read everything I could lay my hand on, and I talked to the individual who was leaving and whom I was replacing. He was a pilot. (They had previously been

Spieth: using pilots to do navigational instruction). He gave me a number of helpful hints and, of course, Major Huff told me how classes should be conducted and gave me other details about our teaching and related duties. Each instructor had eight classes a day -- four hours in the morning and four hours in the afternoon. Every evening before we left the school, we had to post grades.

The teaching of navigation was concerned only with contact navigation; it had nothing to do with celestial navigation. The cadets had excellent maps which we instructed them in reading and correlating with the terrain they could see from the plane. We discussed what wind drift would do to their planes, etc. They also had to learn to use a little manual computer-type instrument which was called the "E68". Knowing the air speed, wind speed, and wind direction, one entered these facts on the E68 and was then able to derive what compass heading should be taken to reach the desired location.

I found it not too difficult to teach the cadets the necessary techniques. But I was concerned because the number lost on cross country trips had been running about 15 to 20 percent. I can't say that I was satisfied with my performance with the first group, but, as I remember, the third class thereafter had less than 2% lost on cross country flights.

Brienes: Were they going up immediately to navigate, as soon as your first class was held?

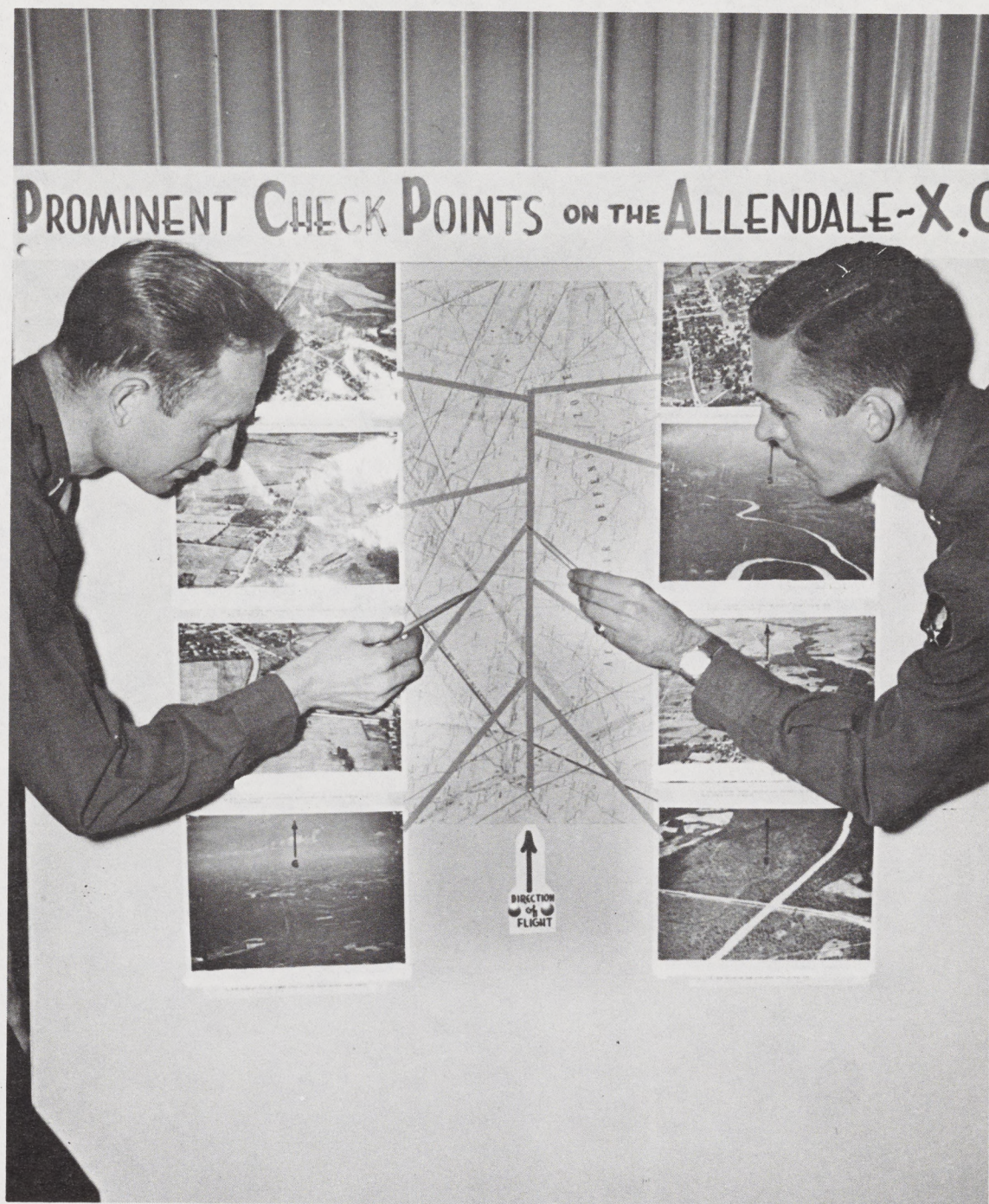
Spieth: These cadets spent half of the day in Ground School and half the day at the flight lines. They did not, however, engage in cross country flights until they had rather thoroughly mastered flying the BT-13.

Brienes: Didn't you feel uneasy, having learned this skill three days earlier, about sending these chaps out in planes?

Spieth: Well, they knew how to fly and they knew there were auxiliary landing areas. I simply had to do the best I could! As I say, we cut the losses very quickly. I myself flew whenever I possibly could to get more experience.

Brienes: Did you learn to fly?

Spieth: I didn't do the piloting. I would fly with one of the officers who was a flight instructor. I made a couple of rather close friends among them. A chap by the name of Paul Long and another was Ronald Scott, who took me up the first time. They gave me



Lt. Herman Spieth and Cadet at Cochran Air Base 1943

Spieth: a great deal of help. Also I frankly enjoyed flying. Often on Saturday afternoons one of them would call up and say, "We've been pushing cadets around all week; let's go out and have some fun!?" So we'd go out and hunt thunderstorms to see what they were like on the inside and also do acrobatics which I still enjoy remembering. It was one of the most enjoyable things I've ever done.

Brienes: Making loops?

Spieth: Dives, spins and rolls -- snap rolls and barrel rolls. Our plane would not do an Immelman.

Brienes: A what?

Spieth: Immelman, which is one of the maneuvers that a plane does in which you take a dive and come up on your back, then turn it over and head back in the other direction. Our planes were not capable of doing that and neither were they capable of doing a full loop. But they could do barrel rolls, snap rolls, spins and stalls.

Brienes: Did you ever learn to fly solo?

Spieth: After a while I got so that I could fly the plane. I never took a plane off and I refused always to land the plane; that's the tricky business. That's where the accidents usually happen. During take-off you can sometimes run into problems but your chances of a problem in taking off are much less than in landing.

I was at Macon for a couple of years. Then the school was closed down when it was obvious that the war was winding down, at least to the point that it was no longer necessary to train pilots at such a high rate as had been true during 1943 and 1944. When Cochran Field was closed, the various Ground School officers were then sent to other stations to do clerical jobs of one sort or another. Since I had some friends who were in altitude physiology work, and since I was a biologist, I was selected to go into altitude physiology which involved going to Randolph Field for further training.

Brienes: Where was Randolph Field?

Spieth: Just outside San Antonio, Texas. When I completed the course of training there, I was assigned to Tyndall Field in Panama City, Florida, where I spent the last year of the war.

Brienes: That would have been '45 to '46.

Spieth: The altitude training program was designed to teach the cadets how to use oxygen when flying at high altitudes and how to detect the effects of oxygen deficiencies. We "took them up" in pressure chambers in which we could simulate any altitude we desired up to 40,000 feet. The cadets had to learn how to handle oxygen masks and what the symptoms would be if they didn't have enough oxygen. This is a tricky business, because when you first get to high altitude and the oxygen pressure becomes reduced, you feel euphoric, almost as if you had had a cocktail. If you don't take steps to see that your oxygen supply is adequate, you are in trouble.

Brienes: That sounds like a different kind of training, less academic and less classroom work.

Spieth: We did regularly give lectures to the cadets and we had to run the low pressure chamber.

Brienes: Were the lectures on general physiology or just basis physiology?

Spieth: Primarily altitude physiology. We also taught the cadets and young officers the principles of night vision. We had, in addition to American cadets, students from various foreign countries sent to the USA for training. I remember particularly a large group of Thais and also Chinese students. For these we lectured with the aid of an interpreter.

The altitude physiology program was not as interesting to me as the navigational instruction had been at Cochran, where I became friends with many of the pilots who would invite me to fly with them partly because I could relieve them of the navigational duties. My first trip to California was made with Paul Long. As a senior instructor he was awarded a two week cross country reconnaissance flight of his choosing. He decided to come to California to visit a brother in San Diego, and suggested that I take some leave due me and come along. So the first time I saw California was from a small military training plane.

We knew that when a senior flight instructor was given time for a cross country trip of the sort we took he would soon be given an important new assignment. Soon after we returned to Cochran Field, Paul was assigned to the first jet squadron the United States had. He was a highly competent pilot and also something of a daredevil.

Spieth: I quickly learned that I always wanted to fly with the pilots who were chance-takers, because if they were still alive they knew how to handle emergencies. It soon became apparent to me that pilots who were always cautious and never took chances were the ones who got killed when an emergency arose and quick reactions were required. We lost several pilots while I was at Cochran. One of them, a chap named Hall, was a good friend of mine. He was a cautious pilot and when an emergency arose at low altitude he really didn't know what to do because he'd never been through it. Certainly there were some of the daredevils who came to grief occasionally but if they survived the first year or so, they were prepared for any kind of emergency. It's like driving an automobile on ice. If you've never driven on ice, you are highly likely to have troubles. If you've had the experience, you know what to do.

Brienes: Of course, if you drive an automobile on ice all the time, the chances are you won't live very long to get good at it. [Laughter].

Spieth: We had no air conditioning in the plane, so when we took off Paul would push to get up high speed so we could reach a cool altitude quickly. The easiest way to do that was to get the plane about ten feet off the runway and then shift it -- we had two shifts on the props -- into high and keep the plane flying level with the runway. When the shift to high pitch occurred, the plane would sink about three or four feet. Paul tried to keep the plane about five feet off the ground for the length of the runway, gaining speed rapidly. Then just before reaching the end of the runway, he would pull back on the stick and the plane would shoot up to about ten thousand feet where it was usually fairly cool. We always got up to ten thousand as fast as we could.

When we came in to land, he followed a standard procedure of flying eight to ten thousand feet altitude over the center of the field where we planned to land. Then he would roll the plane over, turn the nose down, and dive until we got close to the ground, then pancake out and land.

When following such a procedure, I once was scared. We left Riverside, California and flew to San Francisco. We planned to land at the Metropolitan Airport. It was a June day and the fog was in, which is typical, so I told Paul where the airport was located when we got where I thought it was. Because of fog, I had taken pretty good bearings and carefully figured things out. Paul, as usual, rolled the plane over and

Spieth: down we went. We hit the fog and we kept going and going and going into the fog. Finally Paul called back to me and he said, "I'm getting scared!" I said, "I've been scared!" Just about that time we broke through the fog. Of course we were only three or four hundred feet above the water and we were headed straight down.

Brienes: Into the water?

Spieth: Paul yanked back on the stick and we pancaked down within seventy-five feet of the end of the runway and ten feet off the ground. So we slid into San Francisco Airport. [Laughter].

Brienes: That's not the way to come in!

Spieth: Well, it was fun! [laughter]. I took the attitude that if your time is up, it's up.

Brienes: Especially if you like to land like that [laughter], then your time is up. Well, what do they say? -- "There are bold pilots and old pilots but there are no old, bold pilots". [Laughter].

Spieth: When I first reached Cochran Field, Evelyn and Philip could not be with me for some time but eventually we got the upstairs of a house out in the country in the midst of Southern pines. A family by the name of Lifsey, a delightful and gentle southern family, owned the place and lived on the ground floor. Through them we learned to know a number of Georgian families. We found them charming, thoughtful people. Philip was a small boy, only two at that time and he called Mr. Lifsey "Granddad". We still hear from their daughter who was then engaged to a man in the infantry. He had landed with the first wave in Africa. He participated in the Kasserine Pass debacle and some of the toughest fighting in North Africa. His outfit later was engaged in Southern Italy. Of his regiment, he was one of twelve who survived. Now he is a lawyer in Cleveland, has a son at MIT and a daughter doing intelligence work in Washington.

Spieth: When I was transferred to Florida, again I could not find a house for the family at first but eventually I did find a place in the little town of Port Saint Joe which was twenty-five miles from Tyndall Air Base. This was the town where the constitution of Florida was officially signed, so it has Constitution Park. There was a beautiful harbor and a large paper mill run by a DuPont who had been somewhat of a renegade in the DuPont family. He had taken off on his own and eventually developed the paper mill. Port Saint Joe was a typical North Florida

Spieth: village. There was one doctor, one pharmacy in which the doctor was a silent partner, a couple of grocery stores, one general store, no library and no books -- you couldn't buy a book in town. The drugstore had a few magazines of dubious quality. We joined the Book-of-the-Month Club and friends sent us reading material; with these Evelyn started a reading circle which we understand is still going.

In 1838 the citizens of the town built a short railroad (the first to be built in Florida and one of the few then in the United States) from a point in Georgia on the Appalachicola River to Port Saint Joe. This was an attempt to induce the cotton merchants of Georgia to ship their cotton via Port Saint Joe rather than to the less adequate port of Appalachicola. The town enjoyed a financial boom but by 1843 the boom had collapsed, a visiting schooner had brought yellow fever from the West Indies, and a hurricane struck in September. By November the few people who had survived abandoned the town en masse and went to Texas. In 1945 at a service in the Baptist Church in the revived town, Evelyn heard the minister exhort the audience to beg for mercy to atone for the triple disasters that had befallen Port Saint Joe one hundred years earlier. We found Port Saint Joe a very interesting place.

Brienes: Quite a contrast to New York?

Spieth: Truly a contrast.

Brienes: What motivated you to go into the service? You were not forced to do it. You were probably exempt from the draft in '43.

Spieth: Yes, I was exempt from the draft. Well -- I don't know. I just felt that if you were able-bodied and had anything to contribute, you should be doing it.

Brienes: But, it was quite a sacrifice involved. Just professionally for you there was a real cost.

Spieth: Professionally there was some sacrifice involved, but not nearly as much of a sacrifice as some people made.

Brienes: That's true but it meant putting off whatever your main line of research was at that time.

Spieth: Yes, although, interestingly enough, at Port Saint Joe I was able to study a Polistes wasp nest that had been built on the front porch of the little house in which we lived.

Brienes: You published a paper on that?

Spieth: I published a paper. I was able to do some reading, but not much in biology. It was a hiatus, but after all lots of individuals in America were undergoing a much more serious hiatus. I didn't see anything exceptional about doing what I could at that point in the history of our country. I frankly did not find the military life onerous. Many people do. I found it interesting because it was a different kind of life from any I had lived through. Some of it was surprising, for I was amazed at what military discipline can do to an individual.

For example, when the cadets came to Basic School after they'd been in primary training, they all still had somewhat of a civilian attitude. It was amazing how military discipline could change that in a very short time. Of course these cadets had undergone some selection before getting to the Basic School. Probably the psychotics and neurotics had been eliminated. Further they had had to choose to enter the Air Corps. They had all taken a test known as the Stainine Test. Where the name Stainine came from, I do not know. The rating scale of the test ran from one to ten. At certain periods when the Air Corps needed pilots badly, they had dropped down to taking cadets whose Stainines were as low as five and six into the training program.

Brienes: Uh, hum.

Spieth: If the foreseeable future need for pilots became lower, then they would accept only individuals who scored nine or ten. I could estimate the cadets Stainines quickly from the way they performed in class and particularly by the way they performed on cross country trips. They were a select group and interestingly enough when they went into combat the data came back quickly that the Stainine fives and sevens were the ones who, on the average, were most likely to get killed. The eights and nines were the ones who usually came through when emergencies arose.

Brienes: It must have interested you as a Darwinian.

Spieth: It certainly did! The thing that constantly amazed me was how quickly these youngsters could become disciplined through military control to do what they were told to do regardless of what it involved. As a biologist I found this an interesting phenomenon.

Brienes: Some element of mass psychological manipulation involved.....?

Spieth: Well, no. Probably it was the expression of a basic trait in the young male. Hunting tribes used to go on the warpath and it was the responsibility of the young males to defend the tribe. It's built into the human neurological and hormonal system.

Brienes: You yourself were under a military discipline. What effect did it register with you?

Spieth: It did not bother me in any sense at all. It obviously can be subject to abuse, just as any system is subject to abuse. The first field I was on, Cochran Field, had a commanding officer who was a colonel and an extraordinary human being. When a pilot was lost he went to the control tower and stayed there until the flier was found.

Brienes: One such occasion was when the plane had been lost in a large forested flood plain of the Ocmulgee River. After four days of fruitless aerial searching, the infantry from a nearby base was called in to search on foot. They eventually found the plane, but in doing so they came into contact with a number of primitive people living isolated in the swamp-like forest, an area that was subjected to repeated flooding. These swamp people lived in shacks elevated above the height of the flood waters. Some of their dwellings were built in trees. The inhabitants insisted that they did not know a war was in progress; neither did they know Roosevelt was President. They spent their lives totally isolated from the rest of society. As a matter of fact, they lived only some twenty miles from where we were living at that time.

Brienes: Amazing!

Spieth: The colonel also didn't believe that those living on any military base had to be dusty and dry. They could have grass growing and neat surroundings, and he saw to it that they did at Cochran. He and his wife had induced the garden club of Macon to donate and plant a large rose garden at the entrance to the base. Incidentally, he had spent his entire adult life in the Army, having enlisted as a musician second class when young, and then had gradually advanced. Such an individual could never hope to advance further than the rank of a full (bird) colonel. He retired at the time Cochran Air Base closed and was then made the military attache in our embassy in Canada.

Brienes: He called us in the first day we were there -- a group that had all arrived at the same time -- and he said, "Gentlemen,

Spieth: most of you will have certain financial records to take care of, and you will have equipment to take care of. I will not brook anyone being unable properly to account for what he's responsible for, especially with funds". Then he added, "Remember one very important thing. Crooks look like honest men; if they didn't, we wouldn't have any problems [laughter]. Don't trust anybody." There was no favoritism on that base at all that I could ever detect.

Then I went to Tyndall Field where a general was in command. Fortunately the Altitude Physiology lab, to which I was assigned, was not directly under his control. Rather we reported directly to the Washington office of Altitude Physiology. We were merely housed on the base to serve the needs of the personnel. On Tyndall Base I saw favoritism. I saw slackness and low morale.

Brienes: And this you attribute to the commanding general?

Spieth: I'm sure I had enough evidence picked up from other officers to whom I talked to know that his behavior was at least partially responsible.

Brienes: What kind of evidence?

Spieth: If things went wrong and somebody tried to rectify the matter and it involved one of the general's friends, as far as I could tell it was covered up.

Brienes: I bet you after the war that general became a bureaucrat some place!

Spieth: No, I do not know that he did. He was a rather wealthy southerner -- I think he came from Mississippi -- who had been in the National Guard. There was a lot of "crony-ism" going on, a thing that never occurred at Cochran.

Brienes: You said that Evelyn and Philip eventually joined you at Cochran. Were they with you in Florida?

Spieth: When I went to Tyndall Field, Evelyn and Philip went back north again to stay with members of our family until I found housing some time later in the little village of Port St. Joe, which was twenty-five miles east of the Base on the Gulf of Mexico.

Brienes: What did you do for amusement when you were sans family at Cochran and Tyndall?

Spieth: I was scarcely ever off the base when I was living at the BOQ during the periods when the family was not with me. There were parties of one sort or another at the Officers' Club. I read, and at Cochran Paul Scott had a hi-fi which was a good one for those days, and we could listen to music.

At Cochran I renewed my interest in long distance running. The Physical Education officer insisted that I needed to gain weight. I am six feet, one and a half inches tall, and at that time I weighed 132 pounds. He prescribed a regime of exercises plus weight lifting, which he said would be effective -- and he was correct. I gained almost thirty-five pounds, at the same time reducing my waistline one inch and increasing my chest expansion by two inches. That was great, for I ceased being subject to bronchial problems that had besieged me much of my life to that point.

At Port St. Joe (and, of course, Evelyn and Phil were with me there) there were a number of officers from Tyndall living in the town. One chap by the name of Arthur Merrill had been in one of my classes at Cochran and was now at Tyndall Field, a pilot flying B-24s. He became interested in collecting shells, eventually noting the variations in his collections. I collected with him, helped him get books and other background material on the shells. After the war he finished his high school education (he had been a carpenter on Long Island), went to college in Florida, and then to Harvard for graduate studies. He is now with the U.S. Fish and Wild Life Service and is an expert conchologist.

Brienes: What about your fellow instructors at the Base? Did their backgrounds approximate yours?

Spieth: They had diverse backgrounds. There were more high school teachers than college teachers in the group at Cochran. At Tyndall they were mostly college or university people -- either faculty or graduate students. I've lost touch with most of those individuals.

One of my Tyndall Field friends was an exception. His name was Kooman Boycheff. His parents were Macedonians who migrated to Ohio. Kooman was unquestionably the best all-around athlete I have ever known, although he was not physically a large man. He had gone to Oberlin College in Ohio. There he had earned varsity letters in the four major sports: football, basketball, baseball, and track. In addition he was a handball and squash champion of Ohio, plus playing an excellent golf game. At Tyndall Field, Kooman and I played handball regularly.

Spieth: I had played four wall handball in New York City and earlier at Indiana University. I liked it very much.

Brienes: It's quite a strenuous game.

Spieth: Yes, but we were both in excellent physical condition, mainly thanks to Kooman. When we played doubles, my long arms helped a bit. He would always play back court and I would play forward. What I couldn't reach he could -- with his speed and skill. We were considered to be the best team on the Base. After the war, Kooman joined the faculty of the University of Chicago's Physical Education Department. Later, in the 1950s, he joined the faculty of the Department of Physical Education at Berkeley, becoming admired and beloved by many. In February of this year (1978), just after finishing a game of handball he had a massive and fatal heart attack.

When our son Philip joined the Berkeley faculty, he began to play squash with Kooman. Phil is a fairly good player but he could not keep up with Kooman, even though Kooman had arthritis and could not raise his hands above his head; almost invariably Kooman won the match. His death was a real personal loss for the Spieth family.

Brienes: I must show you the letter he wrote about you. It is the best letter of anyone who has responded to my inquiries.

Spieth: Really?

Brienes: He told what happened at Tyndall Field. I think you would probably enjoy reading it. It is a full page of single-spaced typing.

Spieth: I would enjoy seeing it.

Brienes: You began with a commission as a first lieutenant? How did you end up in '46?

Spieth: Essentially the same as I began -- which used to bother me. In retrospect I later realized that it was planned that those of us who were involved in instructional duties would not be given promotions. I did receive a terminal promotion to captain.

Brienes: I see.

Spieth: In addition to personal pride, an earlier promotion would have given a bit more money. A first lieutenant's salary in World War II was not great. Although my salary at CCNY was not great either in those days, my military salary was just about half as much.

Brienes: So -- another aspect of the sacrifice you made.

Spieth: We had some perquisites such as shopping at the PX and medical services, but we still had to pay the mortgage on the home in Tenafly and still had to eat. While we did not truly suffer, it was a period of real stringency for us -- as it was for many others. I tried once during the period at Cochran to get transferred to service as a navigator.

I mentioned earlier that at Cochran Field, I studied celestial navigation on my own, and did it with deliberation because I knew that many of the pilots were due to go overseas and many of them would be flying bombers and other multiple engine planes over long distances. While the pilots were not required to know navigation, per se, I felt -- and they all fully agreed with me -- that they needed to be able to check the abilities and performances of their navigators. Reports repeatedly had been coming back of planes and crews being lost because the navigator had made a mistake. I thought it would be well that the pilot should be able to talk intelligently with his navigator: "Now did you do this, did you do that?" After all, the pilot was responsible for the plane.

I therefore used to hold evening classes for the officers, any of them who wanted to come, and gave them the rudiments of celestial navigation that I had picked up on my own. I got my hands on a sextant. Evelyn and I would go out at night under the Georgia stars and make readings. Then we worked with logarithm tables under the electric bulb hanging over our kitchen table until I was able to get a "fix".

Brienes: That was all self-training on your part?

Spieth: That was self-training. Then I passed on what I learned. I read all I could to gain as many ideas and hints as possible as to where a navigator could make a mistake and where to look for the mistakes in his calculations. In the process the pilots became familiar with navigational techniques and problems. Otherwise they would be dependent upon the navigator without being able to double check his results. Double checking is sometimes the difference between disaster and safety. The Air Corps was running at that time what amounted to military freight lines. These planes were not in actual combat but they were flying across the oceans carrying all sorts of supplies. I tried to get transferred to this area, but was turned down.

Brienes: They wanted you doing what you were already doing.

- Spieth: Although I had excellent recommendations (at least, I saw my file that was sent forward and as far as the Base was concerned I had excellent recommendations), I suspected that in addition to the recommendations there had been a telephone call that I wasn't told about.
- Brienes: I get the sense that had your life been just a bit different, you might have ended up a military officer; you seem to have really enjoyed it and apparently there was something about that life.....
- Spieth: Well, that is an interesting question. Basically I am convinced that there is not such a great gap between military officers and college faculty as most officers and faculties think there is. The bureaucracy in the military and that in the universities is different in detail but in many basic aspects it is fundamentally similar. The dedication of a good officer is equal to the dedication of any faculty member I have ever known. The integrity of the officers I saw was equal to the integrity of faculty members I have known. The only major difference I can see is that you cannot court-martial a faculty member and you can an officer.
- Brienes: There is the relationship, the discipline relationship, between a teacher and a student that would exist between an officer and an enlisted man.
- Spieth: That's right. There are many similarities. Mr. Evensizer, the non-academic administrator of our Department of Zoology, and I have talked about this often. He had enlisted after graduation from high school as a private and retired as a full Colonel. Thus he had never had contact with the academic world until he retired from the Air Force and joined our Department on the Davis campus. I went temporarily from the academic world to the military, and we were both struck by the basic parallels. Superficially they're different but basically there are many parallels in the operation and mores of the two organizations.
- Brienes: That sheds a little light on your feeling about the student revolt of the sixties and your lack of sympathy with that. It would be almost as if an army officer would sympathize with some mutiny, unless I am pushing the analogy.
- Spieth: Yes, you're pushing the analogy for there are differences in the ground rules of the two organizations.

Personal Hobbies and Interests

Brienes: Let's turn to your hobbies and other kinds of interests.

Spieth: Perhaps before we go on to such things, we might put in a few incidental activities in which I was engaged at various times.

While in New York, I was interested in the New York Entomological Society and for a time was the treasurer and then later the president of the Society, and in fact went back to being treasurer for some years.

During the extended considerations given to the development of the Master Plan of Higher Education for California, I served as a member of a committee under the chairmanship of Harry Wellman and attended many meetings, both of the committee and other major meetings. The development and implementation of the Master Plan was a major milestone in higher education, not only in the state but also in the nation.

I served for a number of years in various capacities on the work of the Western Colleges Association, which was and still is involved in accreditation of various institutions of higher learning. I was a member, and sometimes chairman, of accreditation teams for a number of institutions including the University of Guam. This was a real bonus since it enabled me to continue from there, on my own, to visit the small high island of Ponape. High islands are those that have been formed by volcanoes in the Far Pacific. I went there especially to collect some special species of Drosophila that are found nowhere else in the world.

I served for quite some time on the Biological Sciences Curriculum Study (BSCS), which was involved in upgrading the teaching and textbooks of high school biology courses.

These are small items that were incidental to my main life work, and probably there are some others that I have forgotten to mention.

Brienes: Now let's turn back to your hobbies and other kinds of interests. Do you read out of your field?

Spieth: I suppose I might be described as a compulsive reader. I have always been interested in history and in the philosophy of history. I've been particularly fond of Ortega y Gasset and Oswald Spengler. Now I do more reading outside of scientific literature than in the past.

Brienes: Still in history, mostly? I know you had at one time thought of being an historian.

Spieth: During my youth I had intended to become an historian and what I did was change my time-span, in a sense, because evolution is the history of living organisms. I changed from the history of civilized man to the history of all living things [laughter].

Brienes: How about fiction? Do you read much?

Spieth: I read little fiction. Occasionally I skim through a novel. Evelyn reads a fair number of novels and biographies and if she finds one she thinks of particular interest, I may read the first chapter, skim through the book, and finally read the last two chapters. I at least get the flavor of the book and of the author. I think, however, that I have read most of the books written by C.P. Snow in toto, including his novel Brothers and Strangers. I have not seen one or two of his recent books, but we have autographed copies of his earlier work. He is one "lay" author I probably have read more completely than any other.

Brienes: Yes. He combines philosophy, history, and some science.

Spieth: After all, he is a scientist and he writes novels in some ways like a scientist. His novels often deal with scientific endeavors and related matters.

Brienes: I really don't have to ask if you're interested in music. Almost every time I come to your study you are listening to music.

Spieth: I enjoy music but I am a poor musician and always have been.

Brienes: Have you ever tried your hand at it -- being a musician?

Spieth: My mother tried to have me taught how the piano works [laughter].

Brienes: How it works! [Laughter].

Spieth: I was a very poor disciple. At one time I even studied and played the violin in the high school orchestra at Charlestown, but I do not know why anyone ever handed the violin to me and thought I could ever play it properly. I have always enjoyed listening to others make music.

In New York for many years we went to hear the New York Philharmonic Orchestra as frequently as possible -- in the days when Toscanini was the conductor.

Spieth: For something like twenty years we had season tickets for the Metropolitan Opera. Our seats were in the top gallery, but the acoustics in the old Met were superb. One could hear well and we could see the front half of the stage (but not the back half) -- and as far as the acoustics were concerned, they were magnificent. For many years we paid sixteen dollars for sixteen operas, once a week on Wednesday night. During our last three years in the New York City area, we did have orchestra seats and Phil was old enough to go along sometimes.

I did not go more than two or three times a season through the years, simply because I was too busy to take the time. I had to have my evenings for taking care of academic affairs of one sort or another. But Evelyn went regularly.

When we came to California and were in Riverside, the logistics of attending the occasionally produced performances of opera in Los Angeles were time consuming and we were busy people -- but we did go to L.A. to hear a few productions. When we came to Davis, however, we began going into San Francisco each season for the excellent performances given there. Since research often takes us to Hawaii in the fall, our opera tickets are then turned over to our children who live in the Bay Area and who enjoy opera, too.

Brienes: Was it in New York when you started going to the Met that you developed your taste for opera?

Spieth: I had never heard opera in toto before we lived in New York. I had heard only some operatic selections at various times. Where I grew up, on the farm, opera was unknown to me. Even the large towns such as Louisville and Indianapolis rarely were able to have more than an occasional amateur performance. They had no opera companies of their own and visiting companies were not then in existence. Light opera such as The Beggars' Opera, Student Prince, or Green Pastures came to Indianapolis, as did some visiting artists for solo performances -- such as Pavlovsky, Kreisler, and so on. Such occasions opened up exciting doors.

Our first opera in New York was Aida at the old Hippodrome, and then we heard Gotterdammerung at the Met and we were enthralled and entranced. That is when we decided to purchase season tickets -- sheer extravagance for us in that period of really close budgeting.

Brienes: Do you have some favorite operas?

Spieth: I suppose if I were placed on a desert island and allowed to take with me only a few records, I would probably take all of

Spieth: Wagner's Ring Series and some of Verdi. Evelyn would add Mozart. She'd have a terrible time eliminating.

Brienes: What are the Verdi operas that you like?

Spieth: La Forza del Destino is probably my favorite, but I enjoy all of Verdi. I do prefer Wagner's Ring Series over some of his other works -- but the singers must be excellent.

Brienes: Do you have any favorite opera singers over the years?

Spieth: That's very simple! My favorite opera singer was Kirstin Flagstad. In 1941 I heard her sing what was considered to be the greatest performance of Gotterdammerung ever given at the Metropolitan. She was magnificent, spell-binding. We also heard her final personal concert in the United States -- at a small theater in Englewood, New Jersey. It was sheer delight.

Brienes: What are your views about contemporary serious music?

Spieth: I'm sure there are some competent composers these days, but they have probably passed me by. I do enjoy Bartok and Copeland occasionally -- not too often. [Laughter]. And I must add that Peter Grimes is a modern opera that I appreciate. We heard the centennial opera Angle of Repose last year, and thought the staging, acting, and story were excellent -- but Imri's music left us cold.

Of the symphonies I suppose Beethoven would stand highest in my enjoyment. I have found no modern composer to equal him.

Brienes: You have a big yard at your home here. Obviously you do some gardening.

Spieth: I have always done some gardening ever since we have owned a home anywhere. There are several reasons for this. One, I enjoy it. But the second reason is that it's a way for me to keep in fairly decent physical condition. My research work has always involved a great deal of field work; much of it is extremely strenuous. I try to keep myself in appropriate physical condition so that I will not be completely decimated when I go into the field. Gardening and golf help on this score.

Brienes: Do you have a green thumb?

Spieth: No, not particularly. I simply don't spend that amount of time at gardening. But I do manage to keep most of the plants alive.

Brienes: Let's turn to some other matters now, in summing up. I think you may feel uncomfortable about this. Tell me if you are. A few weeks ago you told me that you had met people who were expert in one field and then improperly assumed that they were expert in other fields and had license to speak as experts. What I am going to ask you to do is to speak about things that are outside the field of zoology and that you might not feel expert in. Do you feel uncomfortable about doing things like that?

Spieth: Well, it depends upon whether the question is such that it has a biological implication to it. If it doesn't, then I must confess I would rather not say anything except to express my own "gut" feelings rather than a professional opinion about the matter.

Brienes: But you obviously feel that there is a great deal of application of biological principles in speaking about a man's social condition, for example, and you've given that some thought.

Spieth: Yes, I've given that some thought.

Brienes: I recall reading an article in the Aggie, in an interview when you retired. You got into matters that were outside of zoology but somehow related to biology and evolution. You were speaking about what forces were operating today in an evolutionary way to see who survives and who doesn't, and you were not particularly happy with everything that goes on today in terms of who is making it and who isn't. I don't remember exactly what you said, but I think you indicated that one thing bothering you was the constant pressure to increase the number of regulations that were being initiated to make life less subject to accidents.

Spieth: I don't remember that, but it's probably because my memory is poor. I was rather tired and busy at that particular time. I do have a basic feeling about the matter. The human being is fundamentally a chance-taking animal. This goes back to our evolutionary ancestry. An organism living in an aerial situation in the trees, as our ancestors were, was always taking chances as it went from place to place in the forest -- and falling could be a serious problem. On the other hand, if the animal didn't take any chances, its success in getting enough food to exist would be hampered. So we are chance-taking organisms and it is my observation that if you make life extremely safe in most areas, then individuals, particularly young males, will find other ways of taking chances. This is what I think happens with the automobile; I'm sure it happened in my early days with horses when they were the mode of transportation. It also happened with those who decided to leave home to explore strange lands, centuries

Spieth: ago and even now. Some people more so than others enjoy and get satisfaction out of taking chances. How else can you explain gambling activities except that the players enjoy taking chances?

I can't imagine that if we had a cat ancestry we would do many of the things we do, for cats do not take chances. They lie in ambush before jumping.

Brienes: Well, the way society.....

Spieth: Furthermore, I might add that the way we distribute our garbage around the surface of the earth is another similar item. Cats take very good care of their garbage. The human animal drops it casually on the surface of the earth -- and forgets about it. That was all right for our ancestors who lived in trees because it all fell to the ground and out of sight, out of mind. Now we're living on the ground but we still have the same habits that our ancestors had of dropping our garbage, and we've cluttered the earth as a result. If we had had cats for ancestors, we would not be this careless. Cats bury everything, you know. There's an interesting book written by a man named Day on this very matter, describing what the world would be like in the twentieth century if our ancestors had been cats instead of primates.

Brienes: Well, you are an evolutionist and you believe that the human species, as any other, evolved by reacting with the environment over many, many long ages.

Spieth: Being selected by the environment over many, many millions of years.

Brienes: And those qualities in people that enabled them to survive became dominant in the species.

Spieth: Our basic psychology, physiology, and morphology are the end result of the evolutionary history of our ancestors, especially the evolutionary history of the past three or more millions of years after our ancestors abandoned an arboreal life style and became fully terrestrial. Our existence as terrestrial omnivores with emphasis on being carnivores whenever possible certainly had a real impact as a selective mechanism on our nervous and hormonal systems. About six to ten thousand years ago, the invention (if you can call it that) of agriculture drastically changed the life style that had been in existence at least a million years and probably two or two and a half million years before that.

Brienes: Is there a break then in the effect of evolutionary forces on man?

Spieth: Yes, because this change in life style created different selective forces. No one, I think, who knows anything about evolution would deny that selection is going on today, just as it has always gone on, but the selection forces are different today.

Brienes: One has to adapt now to a different.....?

Spieth: That's right.

Brienes: .....to different forces.

Spieth: We can adapt culturally to selective forces rather rapidly. Certainly it is one of our great gifts that we can culturally adapt; there's no question about that. On the other hand, there are certain characteristics built into the nervous and endocrine systems that can be modified only by evolution, and this cannot be accomplished in a short period of time. I'm sure the human creature of a million years from now will be considerably different than we are today. All we have to do is look back a million or two years and see how much we have changed during that period. We have some reason to suppose that the evolutionary rate of change no longer may be as great as it has been in the past, but it may be greater. We cannot tell how fast the rate will be in the future but we can be sure that there will be changes. The human organism will surely change.

Brienes: It will adapt biologically to changes?

Spieth: Heaven knows what the human animal will be like in the future, but it will be different than it is today -- just as certainly as we are different from our ancestors who lived a million years ago.

Brienes: It may be that man himself is creating the change -- the conditions that he will have to adapt to?

Spieth: That's right. All social organisms do this; in a sense they create their own changes to a certain degree, because they do modify the environment and their life style as a result; this in turn modifies the selective pressures. But we should never forget that selection keeps on occurring regardless of what we do.

Brienes: That's hard for me to understand for I can see great changes in the number of people who can live lives today when they would in

Brienes: the past have died at birth because of defects -- but who now stay alive much longer, very often to reproduce themselves.

Spieth: That's right. Previous to this century, the major selection agent was death. In other words, many individuals often died at a very young age simply because they came into existence with a defect that was at that time intolerable for living in society as it then existed. A child that was born without a hand, and this does happen, would have been greatly disadvantaged in a primitive society. A child that was born blind would have died young and it would never have left any offspring for the next generation. We have removed many of these selective mechanisms because now these individuals are not only kept alive but they are reproducing. Insofar as their traits are inheritable, they therefore are changing the structure of the population.

Brienes: Does it concern you at all that there seems to be some aspect of negative selection operating?

Spieth: No, this does not bother me, because inevitably selection will reassert itself. It may be different than it has ever been in the past, but it will reassert itself. It still exists -- the emphasis may shift but selection will still be going on.

Brienes: But it seems paradoxical that, in a society where medical knowledge is greater than ever before, we are having more and more people born prone to illnesses that would have eliminated them years before. It seems counter to what nature had intended to happen.

Spieth: No. This is the sort of thing that happens in any social organism. It unquestionably has happened in the ants, the termites, and so on -- social organisms which have been able to control the environment in which they live. By doing so, they modify the selective agents. This is nothing new at all; it has been going on always.

Brienes: Well, I know some people who would consider themselves conservatives of one type or another -- social conservatives -- would rely on Darwinian reasoning to say we ought not to have any social welfare systems or try to keep alive people who in raw nature would not have made it.

Spieth: To a certain extent I take the same point of view, but in a quite different sense. For living creatures the name of the game is the acquisition and utilization of energy. Therefore, if you have an individual in society who is incompetent in the

Spieth: acquisition and use of energy, he or she can be considered biologically a detriment to society. I have pointed out to my students, particularly in the last few years of teaching, that anything causing death in an individual over sixty or sixty-five is, on a statistical average, beneficial to society because there is only a limited amount of energy resources available and here are non-reproducing and non-productive individuals (on the average) utilizing those sources of energy that are available to the society as a whole. For example, many parts of the world are short of food today. Think how much larger the food supply would be, per person, if all of the individuals in the world who were over sixty were gone tomorrow morning. Extra food would be available then for the younger people. No, in that sense I do not feel particularly disturbed, except selfishly, when friends of mine die who are over sixty or sixty-five. They have lived life; they have spanned their reproductive cycle. Some of them are still productive members of society; most are not. Most (and I am one of them today) are simply parasites on the rest of the body politic.

Brienes: You come close to skirting a very dangerous area, don't you?

Spieth: No, I am merely pointing out a biological reality. In the long run natural selection will solve such problems. Time doesn't matter; the earth has another three or four billion years yet to go and that will take care of such matters.

Brienes: Do you think that there will be people around in some form or another -- that long -- the way we're going?

Spieth: Biologists know that ninety to ninety-five percent of all the species that have ever existed are no longer living. However, many of those species no longer in existence have derived descendants that are still in existence. For example, in our own case, our original ancestor was probably Australopithecus or some similar creature which is no longer in existence. Today we, Homo sapiens, now exist. Homo erectus, a species intermediate between our original ancestor and ourselves, is no longer in existence but we are its presumed descendants.

Our own immediate ancestral line has been evolving for at least several million years, and we're still here. Not only that. We're the most successful species that has ever lived and we are the only one that dwells over the entire surface of the earth. I have no doubt that we will keep on for another ten or fifteen million years, unless a catastrophe happens that is over and beyond anything that man himself could do. The ants have gone on for millions of years; the termites have gone on

Spieth: for millions and millions of years; even the dinosaurs lived for millions and millions of years -- much longer than the span of human existence. I don't see any reason why fifteen million years from now there won't be descendants of humans still living on the surface of the earth.

Brienes: But you do have a sense of -- at least in the short term -- a disaster up ahead for us?

Spieth: Well, that is another story. I can see drastic changes coming simply because I look at the growth curves of populations in a number of organisms. Some of these curves we call epidemic growth curves because of their rate of growth. The inevitable result in any one of these (whether you study it in the laboratory or in the field) is that a population crash always follows a period of epidemic growth.

I suspect that the human population is due in the next hundred years or so for a crash. But that's a relative thing. Such crashes usually do not destroy the species; they simply reduce it down again to the size for which the environment has sufficient resources for supporting the resultant smaller population. When a species goes out of existence, it is because some selective mechanism, a relationship with the total environment, has gotten out of balance and the population can no longer continue to reproduce. As to why this happens, we have few bits of evidence, but it does happen. Most lineages, such as the human lineage, can go on for a long, long time.

Brienes: You expect us to go on. But life will be different because there will be some cataclysmic event?

Spieth: I don't know whether it would be cataclysmic. I can only say that epidemic populations always crash sooner or later.

Brienes: Well, what's the scenario that you see for the next hundred years, then? What would you expect to see happen to reduce the population? Some mechanism must reduce it.

Spieth: I don't know. I am intrigued by the fact that when great cultures disintegrate the population absolutely declines. For example, the data are clear that after the Roman Empire disintegrated, the population went into a drastic decline.

Brienes: There are no answers for this? Do we not know what happens?

Spieth: I do not think we really know what destroys a great culture, but when it disappears the population always goes down.

- Brienes: Do you see the disappearance of great cultures or civilizations as being tied into some biological mechanism then?
- Spieth: I haven't any notion; this is one of the intriguing questions of history and sometimes I think that historians have not paid enough attention to the biological aspects of the declines of civilizations.
- Brienes: You have told me that the historian that you either enjoyed reading most or who had the most influence on you was Oswald Spengler.
- Spieth: Yes, Oswald Spengler thinks of cycles, cultural cycles. He really never pinned down what causes the cycles; he merely describes them. He did believe that any high culture contains within its own organization the seeds for its eventual destruction.
- Brienes: And the fact that it did eventually decay was something that could not be avoided?
- Spieth: That's right.
- Brienes: It was just inherent in its whole development?
- Spieth: But you must remember that Spengler points out at the end of his book The Decline of the West that, even though the culture is gone, the species has not gone out of existence. It is merely that the population size and also its cultural attitudes have changed drastically. And so when Rome, that is the Roman Empire, disintegrated, the population decreased; we know that. But there were people still left. They were living different kinds of lives -- had different life styles. But there were still people.
- Brienes: But in Spengler's life cycle of the civilization, at least there is a biological analogy -- if no more than an analogy -- for Spengler.
- Spieth: The same sort of thing happens in ant colonies. If you observe an ant colony and follow it for a number of years and generations, it usually eventually disintegrates.
- Brienes: Is there a biological explanation for why it disintegrates?
- Spieth: We don't know the biological explanation; we just know it occurs. We can have some ideas about what happens but we really do not know the fundamental causes.

Brienes: What attracted you to Spengler so much -- to his concept of world civilizations -- civilizations growing, thriving, and dying?

Spieth: I suppose since I started out to be a historian, his ideas intrigued me. I could see no rational reason why the Roman Empire or the Assyrian Empire or the Egyptian Empire should simply have disintegrated as cultures. These were amazing peoples, all of them! -- intelligent and technologically advanced. You can say, "Well, the barbarians invaded them," but that is not always the answer.

Brienes: That was a symptom more than a cause?

Spieth: That was a symptom more than a cause! Yes.

Brienes: Now we are living in one of Spengler's great civilizations and I guess Spengler would say we are now at some place in the winter of our cycle. Would you say?

Spieth: Oh yes.

Brienes: Do you believe that of western civilization, of which we are a part? Do you believe that we're in a period of decay for our civilization?

Spieth: Ah, it all depends upon what you mean by "decay" in a sense.

Brienes: Well, in Spengler's sense of its no longer growing and being creative. As Spengler puts it, a biological analogy would be the arteries hardening and everything ossifying, losing resiliency -- the state that he called "civilization".

Spieth: I suppose I would say we are in the autumn of our culture rather than in the winter. Apparently each culture has a congerie of ideas that it works out. Having done that, it appears not to be able to generate new ones within the pattern already evolved. Toynbee talks about this matter more than Spengler does; whether a culture can rise to the challenge of a new environmental situation. Of course, Toynbee believes that some cultures have done so and that others have not. One culture in the world that seems to go on indefinitely, with ups and downs but still maintaining some stability, is that of the Chinese. There are primitive cultures that have been doing so for ten or fifteen thousand years without (as nearly as anyone can tell from available data) essentially changing one iota during that period of time. We still have such cultures in the Amazon Basin, some of which have recently been studied intensively by many people. At

Spieth: certain levels apparently a culture can go on for a long period of time. This is one of the intriguing things about the past -- that we really have few data to go on.

Brienes: How would you sum it up?

Spieth: As a biologist I am pessimistic about the short range condition of the human species, simply because we seem to be in an epidemic curve as far as population growth is concerned.

In the long run I am very optimistic that of all the species on the surface of the earth today, we are the toughest, most flexible, and most enduring.

## Vita for Herman T. Spieth

Date of birth: August 21, 1905 in Charleston, Indiana, U.S.A.

Title: Professor of Zoology Emeritus

Education: B.A. in Zoology, Indiana Central College, Indianapolis, Indiana, 1928

Ph.D. in Zoology, Indiana University, Bloomington, Indiana, 1931

Professional Experience:

Professor of Zoology Emeritus, University of California, Davis-1973 to date

Professor of Zoology, University of California, Davis-1964-1973

Chairman of Department of Zoology, University of California, Davis--1964-1971

## APPENDIX A

Guest Investigator, Genetics Foundation, University of Texas, Austin, Texas--summer of 1967

Visiting Colleague, University of Hawaii, Honolulu, Hawaii--summers of 1963, 1964, 1965, 1966, 1968, 1969, and spring 1974

Chancellor and Professor of Zoology, University of California, Riverside, California-1975-1984

Professor of Zoology and Head, Division of Life Sciences, University of California, Riverside, California-1953-1956

Visiting Professor, Department of Zoology, University of Texas-1949-1950

Visiting Professor, Department of Entomology, University of Minnesota--summers, 1948-1951

Research Associate, American Museum of Natural History, New York City-1943-1946

## Vita for Herman T. Spieth

Date of birth: August 21, 1905 in Charleston, Indiana, U.S.A.

Title: Professor of Zoology Emeritus

Education: B.A. in Zoology, Indiana Central College,  
Indianapolis, Indiana, 1926

Ph.D. in Zoology, Indiana University, Bloomington,  
Indiana, 1931

## Professional Experience:

Professor of Zoology Emeritus, University of  
California, Davis-1973 to date

Professor of Zoology, University of California,  
Davis-1964-1973

Chairman of Department of Zoology, University  
of California, Davis--1964-1971

Guest Investigator, Genetics Foundation, University  
of Texas, Austin, Texas-summer of 1967

Visiting Colleague, University of Hawaii, Honolulu,  
Hawaii--summers of 1963, 1964, 1965, 1966, 1968,  
1969, and spring 1974

Chancellor and Professor of Zoology, University  
of California, Riverside, California-1956-1964

Professor of Zoology and Head, Division of Life  
Sciences, University of California, Riverside,  
California-1953-1956

Visiting Professor, Department of Zoology, University  
of Texas-1949-1950

Visiting Professor, Department of Entomology, University  
of Minnesota--summers, 1949-1952

Research Associate, American Museum of Natural  
History, New York City-1943-1960

## Major Areas of Research:

Lecturer, Department of Zoology, Columbia University-1938-1952

Assistant Director, School of Altitude Physiology, U.S. Air Corp, Tyndall Field, Panama City, Florida-1945-1946

## Membership in Professional Organizations:

Head, Navigation Department, U.S. Air Corps, Cochran Field, Macon, Georgia-1943-1945

Visiting Investigator, British Museum of Natural History, London-1939

Head, Marine and Freshwater Biology, Cold Spring Harbor Biological Laboratory, Long Island, New York-summer, 1931-1938

Instructor to Associate Professor, College of The City of New York, New York City, Department of Biology-1932-1953

## Incidental Experiences:

Instructor, Department of Zoology, Indiana University-1931

## Courses Taught:

General Biology, Field Biology, Parasitology, and Comparative Anatomy-College of the City of New York

Biology of Insects-Columbia University

Marine and Freshwater Biology-Cold Spring Harbor Biological Laboratory

Economic Entomology and Field Zoology-University of Minnesota

General Biology-University of California, Riverside and Davis

Animal Behavior-University of California, Davis

Research Associate, American Museum of Natural History, 1943-1944

Spotted Wildlife Preserve, University of California, Davis campus, 1973.

- Major Areas of Research: Originally began graduate studies in the area of limnology; from 1926-46, studied the behavior, evolution and systematics of the Ephemeroptera (mayflies); from 1946 to date, have studied the behavior and evolution of Drosophila.
- Membership in Professional Organizations: American Institute of Biological Societies  
American Society of Limnology and Oceanography; founding member; resigned upon retirement  
American Society of Zoologists  
American Society of Naturalists  
American Association for the Advancement of Science; resigned on retirement  
Animal Behavior Society  
Desert Protective Council, Inc.  
Entomological Society of America + N.Y. Entomological Soc.  
Society of Systematic Zoology  
Society for the Study of Evolution; founding member  
Sigma Xi
- Incidental Experience: Executive Committee, Biological Sciences Curriculum Study, A.I.B.S.  
Chairman, College Biology Committee of the Biological Sciences Curriculum Study, A.I.B.S.  
Executive Committee, Western Association of Schools and Colleges  
Western Association of Schools and Colleges Accreditation Committees; chairman of five and member of four  
Western Association of Schools and Colleges Hearing Board Panel, 1974 to date  
Executive Committee of the Desert Protective Council, Inc.
- Honors: Waterman Fellow, Indiana University, 1930-31  
LL.D., Indiana Central College, 1958  
President, New York Entomological Society, 1938;  
Treasurer, 1939  
Fellow, Animal Behavior Society  
Fellow, Entomological Society of America  
Fellow, California Academy of Sciences  
Research Associate, American Museum of Natural History, 1943-1960  
Spieth Wildlife Preserve, University of California, Davis campus, 1973.

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